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CONSTABLE'S

EDUCATIONAL SERIES

HOUSEHOLD ECONOMY.

EDINBURGH: THOMAS CONSTABLE AND CO.
HAMILTON, ADAMS, AND CO., LONDON.

HOUSEHOLD ECONOMY

A MANUAL INTENDED FOR FEMALE TRAINING COLLEGES

AND THE SENIOR CLASSES OF GIRLS' SCHOOLS.

BY

MARGARET MARIA BREWSTER,

AUTHOR OF "WORK, OR, PLENTY TO DO AND HOW TO DO IT;" "SUNBEAMS IN THE COTTAGE;"
"LITTLE MILLIE AND HER FOUR PLACES," ETC., ETC.

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PREFACE.

HAVING been asked to write a Manual of Domestic Economy principally for the use of Female Training Colleges, the author has attempted to do so with the earnestness and sympathy which such an important subject demands. While some of the topics had previously come under her personal and practical consideration, she has painfully felt her ignorance and incapacity to deal with others ; and she has consequently had recourse to books, as well as to the knowledge of more experienced friends. Johnston's *Chemistry of Common Life*, Johnston's *Catechism of Agricultural Chemistry*, Youman's *Handbook of Household Science*, *The Food of Man*, the *Finchley Manuals*, and Miss Burdett Coutts' admirable volume of *Prize Essays*, have been her principal authorities.

AUGUST 1858.

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DOMESTIC ECONOMY.

CHAPTER I.

INTRODUCTORY ADDRESS TO TEACHERS.

A FEW weeks ago, I went into a Training College for Female Teachers. It was a solemn sight. Probably those who sat there—some indifferent, others idle, others with ringlets or dangling ribbons, busily occupied in watching their neighbours and visitors, others eager to display their cleverness and well-prepared lessons—did not think that it was solemn at all. Perhaps even those grave, modest, intelligent pupils, whom I rejoiced to see there, did not fully realize *how* solemn and how suggestive it was of anxious and earnest thought.

Dear friends, read with me a passage in your Bibles, which you must often have read before : “ Who can find a virtuous woman ? for her price is far above rubies. The heart of her husband doth safely trust in her, so that he shall have no need of spoil. She will do him good, and not evil, all the days of her life. She seeketh wool and flax, and worketh willingly with her hands. She is like the merchants’ ships ; she bringeth her food from afar. She riseth also while it is yet night, and giveth meat to her household, and a portion to her maidens. She considereth a field, and buyeth it : with the fruit of her hands she planteth a vineyard. She girdeth her loins with strength, and strengtheneth her arms. She perceiveth that her merchandise is good : her candle goeth not out by night. She layeth her hands to the spindle, and her hands hold the distaff. She stretcheth out her hand to the poor ; yea, she reacheth forth her hands to the needy. She is not afraid of the snow for her household ; for

all her household are clothed with double garments.¹ She maketh herself coverings of tapestry ; her clothing is silk and purple. Her husband is known in the gates, when he sitteth among the elders of the land. She maketh fine linen, and selleth it ; and delivereth girdles unto the merchant. Strength and honour are her clothing ; and she shall rejoice in time to come. She openeth her mouth with wisdom ; and in her tongue is the law of kindness. She looketh well to the ways of her household, and eateth not the bread of idleness. Her children arise up, and call her blessed ; her husband also, and he praiseth her. Many daughters have done virtuously, but thou excellest them all. Favour is deceitful, and beauty is vain : but a woman that feareth the Lord, she shall be praised.”² Then compare these words : “A foolish woman is clamorous : she is simple, and knoweth nothing. She is loud and stubborn ; her feet abide not in her house. Her house is the way to hell, going down to the chambers of death. It is better to dwell in a corner of the housetop, than with a brawling woman in a wide house. Every wise woman buildeth her house : but the foolish plucketh it down with her hands.”³

You will find here two pictures : the one of woman as she ought to be ; the other of woman as she often is. Were you in the position of other young women of your years, with no one but yourselves to train and teach, or with one or two young sisters around you, or with the distant probability of having a few children of your own,—even then this startling contrast ought to make you think and pray, and learn humbly to choose the better part. How much more when each one of you sitting there, carelessly or calmly, is to have direct influence for many years of your life over successive hundreds of young girls ! The time will come when, with your classes before you, the awful responsibility will rest upon your conscience, whether those youthful beings may become the one kind of woman first described, or the other, the curse or the blessing to themselves and all around them.

Few sights are more significant and touching than the groups of children, gathered out of many homes, around their teacher. What is to be their earthly future ? That little sun-burnt honest face may be a wife in whom the heart of her husband shall trust, whose clothing shall be strength and honour ; that other childish

¹ See marginal reading.

² Proverbs xxxi. 10-30.

³ Proverbs ix. 13 ; vii. 11, 27 ; xxi. 9 ; xiv. 1.

form may yet be a mother whose children shall rise up and call her blessed ; that little one with the fair rosy cheeks may, alas ! turn into one laden with many lusts, whose ways are the ways of death ; another may be the good and faithful servant, so rare and so precious in the eye of the Master in Heaven, as well as the master on earth ; another yet may be the brawling woman who bringeth woe to all around her, or a tattler and busybody, spreading mischief from house to house. But how solemn the question, and largely dependent on the other, What shall the everlasting future of these children be ?

Dear friends, is it not, then, a solemn thing to be in training to take upon yourselves much of these two futures ? Unless you learn well, you will never be able to teach well. Unless you educate yourselves, not only by the book, or in the classroom, but in the house, in the highway, in the quiet hours of thought, in the joys and sorrows of life, you will never be able to educate others. Unless you have chosen the portion of God's Word and God's Spirit for your own, you cannot help your future pupils to obtain the Strong and Wise Guide, who can alone teach successfully all things, from "the things that are of Jesus," to the performance of the commonest duties. It has been said that "The teacher is the parent of the soul : the seat of the teacher is the throne of the world."¹ But the only way of attaining to this honourable position is for the teacher to be and to do what she expects her pupils to be and to do also ; without this element in her work, she is but a name and not a reality. The teaching of the head is not in much danger of being neglected in the present days ; the intellectual progress of her pupils reflects credit upon the teacher,—she is proud of the quick answer, the intelligent definition, and the approbation of school-inspectors and fashionable visitors : but it is not always so with the teaching of the *hands*. There is, apparently, nothing to excite praise and admiration in the neat sewing, the superior knowledge of cookery, the best modes of baking and washing, the intelligent comprehension of common things, too often, alas ! the most uncommon of all kinds of knowledge, the most neglected of all acquirements. Who gave the hand, with its beautiful powers of adaptation to every manner of work ? Who added to the hand of woman, if destitute of the stronger grasp, its more delicate powers of touch

¹ Archdeacon Allen, in *Lectures to Ladies on Practical Subjects*.

and action? Who but the Giver of every good and perfect gift? He it is, moreover, who has so cast the lot of woman, that to be ignorant and idle in the use of the hands, is a curse of which no goodness of intention, no education of the mind, nay, even no religion of the heart can prevent the bad and dangerous consequences to those depending on her. It is this teaching of the hands,—combined with proper application of the head, without which it is of no avail,—to which the following book is to be especially dedicated.

Both teachers and pupils often look down upon the common things which form the subjects of instruction in “Domestic Economy,” as unworthy of intelligent and educated women, and when obliged to perform a certain routine of these duties, they hurry them over as quite apart from the more noble and interesting parts of education. To do so, only shows ignorance and want of thought. Do you know what “domestic economy” means? or when you have heard it defined in the class-room, have you really thought and understood that it does not mean only saving money, or being stingy and narrow-minded and stupid. Economy will teach you how to give and to save, how to buy and to sell, how to lend and to spend, how to be just and how to be generous. Economy will teach you “how to live and how to make others live in the best possible way.” Economy means “the wise management of labour,” whether shown “in the administration of a house or a kingdom,” or of God’s beautiful world. The weak woman and the mighty statesman, are, or ought to be, putting into practice the same principle which created and which governs the universe.

Domestic economy is the salt which would preserve the nation from much of its festering and loathsome corruption. Yes, my friends, it is to be the work of you, and such as you, to train and teach the future wives and mothers of your country. A far different nation would England be, if no husbands, no fathers, no brothers, were driven to the taverns and gin-palaces, and from thence to the prisons, the hulks, and the gallows, by women ignorant of common things,—by homes destitute of common comforts. Of these things as well as many others, it may be said that

“Great floods have flown from simple sources.”

Listen to these words: “A nation is made powerful and to be honoured in the world, not so much by the number of its people, as by the ability and character of that people; and the ability and

character of a people depend in a great measure upon the *economy* of the several families which make up that nation. There never yet was, and never will be, a nation permanently great consisting for the greater part of wretched and miserable families.”¹

Domestic economy is the chief way of preserving and using that wonderful gift, *woman's influence*; and bringing it to bear upon higher things. Women may be proud of this power, may try to prove that they possess much of it, may think that they use it bravely; they may call up their pretty looks, their winning ways, their clever speeches, their religious intentions, their knowledge of reading and writing, and crochet and dancing, but without common sense and practical knowledge, they will still be useless and unhappy wives and mothers. In the tradesman's kitchen, in the working-man's cottage, or in houses of greater wealth and higher pretension, they will still be women without influence, or rather (as that is *impossible*) women exerting a bad and deteriorating influence upon husbands, children, friends, and servants.

To consider that the teaching of the hands is a thing separate and far apart from the teaching of the head, is also another proof of ignorance, whether exhibited by the teacher or the pupil. The education of “common things” cannot be rightly imparted or received without the exercise of thought and intellect: it will be productive of a far higher and more complete intelligence than the education consisting only of the rules of arithmetic—the correct geographical lessons—the glibly repeated historical dates and events. To be taught to think, is the basis of all education. To ask and to be answered, and to be able to tell again, the how and the wherefore of the daily material of the daily work of the hands, is a direct and successful exertion of observation and mental power, —requiring, moreover, no slight or superficial knowledge of what has been called “Household Science,” comprising the nature of the atmosphere, the effects of light and heat, the products of the soil, the properties of the different substances used as food, the processes by which the fibres of the plant, the lining of the nut, and the threads of the worm, are manufactured into useful and beautiful articles of clothing. It has been well said, “If woman has been trained to live by How and Why, always pouring down by these conductors the whole energy of the mind upon the matter actually on hand, she will surely make a wise wife or a clever servant.

¹ Cobbett's *Cottage Economy*.

There is nothing in English men and women to prevent the vast majority of them from going about their work in this way, except the want of early stimulus to a free and full habit of thought, this being the defect of nearly all our schools.”¹ Nor is such education destitute of beauty ; it will not teach you or force you to teach your future pupils to become so dry and practical, that you will turn into scientific drudges, or useful pokers,—you may train yourselves, and you may train them to see in all these things that marvellous adaptation which is the principle of all beauty, and that interest which must ever result from a knowledge of the wise and beautiful gifts of the Good Giver. We only need to teach and to be taught How to observe, or How to have our eyes open in places full of beauty, which we have hitherto walked through with scaled eyes and locked hearts.

The object of this introductory chapter will not have been answered unless you are prepared to go through the remainder of the volume with an interest and an anxiety which you did not feel before, unless you have cast away any scorn of practical everyday work which, like “ ill weeds,” has been growing apace in your minds, and unless you are determined to learn as those who are to teach “ common things” with the earnestness and sympathy of educated and intelligent women. No good will ever be done by those who think that they are “ above” such things, and who teach them as something belonging to their pupils, and not to themselves. They belong, or ought to belong, to the scholar in her homely cottage, to the teacher in her spacious schoolroom, to the wife in her one room, be it cellar or garret, to the lady in her drawing-room, and to the peeress in her castle.

¹ Dickens’ *Household Words*.

CHAPTER II.

HOW TO KEEP WELL

WITHOUT health there can be but partial domestic economy at the best : generally speaking, when health fails, there is an end of all economy. Sad it is for the poor man's household when sickness enters there,—when the father cannot go to his daily labour, when the mother is prevented from carrying out her plans of activity and industry ; when doctors and drugs take up at one sweep the savings of the past, and the earnings of the present, and there is no resource for the most prudent but running into debt. I have, therefore, placed health foremost in my instructions upon domestic economy. Perhaps you are surprised that it should form a part of instruction at all, and are disposed to think that health is a blessing for which we can only be thankful when we have it, and resigned when it is taken away. Health, however, is very much more within our own reach than is generally supposed ; common sense, common care, and common preventives will do much, and therefore I would earnestly recommend the subject to your careful attention, so that in your future teachings you may never forget that “ how to keep well,” is a far easier and more useful lesson, than “ how to be cured when we are ill.” I shall divide this chapter into six sections—I. The choice of a house. II. Light. III. The use of bathing. IV. External cleanliness. V. Ventilation. VI. How to escape fever poisons.

I. *The Choice of a House.*—The importance of this consideration cannot be too strongly impressed upon women who may become the wives of artisans or tradesmen. Too often, they think, that it does not belong to them to interfere, and the matter is left to John or Thomas ; those fatal words, “ It doesn't signify,” or

“ anything will do for us,” are heard, because it only concerns the health and happiness of themselves and their children for many years of life,—words that are never heard when finery of dress or “ gentility” of furniture are in question, which are considered as strictly feminine objects of interest. If the house be low and damp there will be agues, and rheumatisms, and colds, and depression of spirits : to work and to be cheerful will be “ under difficulties,” because when the air is already saturated with moisture, it refuses to receive the additional portion offered to it from the lungs and skin, which therefore returns into the system. The poisonous or unhealthy vapours also, which arise in a dwelling, are debarred from their usual way of escape into a fresh dry air, and thus epidemic diseases are much more common in a damp than in a dry locality. If the exposure be to the north, more fuel will be required to warm the chill dark rooms. If there are bad drains and polluted air, the inhabitants will be liable to cholera, and typhus, and consumption, and scrofula, because, as will be more fully explained to you in another section, the atmosphere is thus filled with poisonous vapours, which go into the system, and cause disease and death as surely as the fatal draught of the poisoner. If there be only one room in which are to be huddled father and mother and children—and perhaps a lodger—health, cleanliness, and propriety become almost impossible. What urgent need, then, to teach your scholars the importance of these things, that they may afterwards use their influence modestly but firmly. Men have often no time to think about such matters, and therefore it is doubly needful that women should know and should be able to point out to their husbands, and even if need be, to their landlords, what is necessary for the health and respectability of their families. A cheerful, well-lighted exposure, a dry, well-drained dwelling (if possible on a gravelly soil), a kitchen and two or three bedrooms, where father and mother, boys and girls, may have seemly and comfortable rest by night, and space by day, ought to be insisted upon. More rent must of course be given than for a miserable and unhealthy hovel, but every wise woman commencing housekeeping, will set herself to save this increased outlay by greater economy in furniture and dress, or in miscellaneous expenditure, which, as we shall see in another chapter,¹ swallows up the “ lion’s share” of the poor man’s means. Besides, the increase of health, strength, and cheerfulness (three

¹ See Chapter VII.—“ How shall we manage the purse ?”

important requisites for working and making money), would soon repay the additional house rent. Asphalt— a hard yet light bituminous substance—is now employed largely in the building of houses, especially those of one story ; it is very cheap, and is used for lining the walls, the roofs, and the foundations, effectually keeping off damp, and rendering the dwelling warm and comfortable.

II. *Light*.—Plants turn their leaves to the light: they thrive under the influence of the blessed sun ; whereas they become sickly, and their bright colours are “blanched” or whitened, when kept in darkness. Sir Humphrey Davy, an eminent philosopher, found by experiment that red rose-trees carefully excluded from the light produce roses almost white. Vegetables and fruits are also favourably affected by light—they ripen sooner, and their flavour becomes richer. It is good for man, also, to live in lightsome places. To have plenty of windows in a house, and those windows admitting the beams of the rising, noonday, or western sun, will promote the health and cheerfulness, strength, digestion, and good colour of its inmates : now that glass is cheap, the light of heaven is a luxury which all may endeavour to obtain. The want of proper light in schoolrooms produces effects that show the importance of attending to it in dwellings. It has been found that teachers and pupils become sluggish and stupified in an ill-lighted room ; while the eyes of the teacher have a strangely painful and excited appearance at the end of a day of such depressing and difficult exertion.

The lights which we use in feeble imitation of the glorious sun, are all more or less injurious to the eyesight, especially gas, which is the cheapest and brightest of all. This is peculiarly the case when it is improperly placed opposite to the eyes ; the light should fall upon the book or work, and not upon the eyes. Blue and green shades or reflectors are easily made of paper or silk, which not only shade the eyes, but collect the rays of light, and fix them upon the part where they are required. Common white paper reflectors will give more light, though less protection, than the coloured ones. It is more from the want of care than from anything intrinsically dangerous, that those who require to labour long by artificial light, so frequently injure their sight. I have read that the Chinese take great care of their workwomen's eyes ; in the north of China the embroiderers always have their rooms painted green, and have green blinds, so that a popular

book of patterns is called "The book of the lady of the green window."

III. *Use of Bathing.*—It might be thought, in looking into many a cottage home, that the principal use of water is to boil up with tea, or mix with spirits, or at most to give the children a drink when they are thirsty, or wash their clothes when they are particularly dirty. Again may we learn a lesson from the beautiful little plants; not only do they turn from the dark side of things to the sunshine which God gives them—not only do they eagerly drink the fresh rain from heaven, but that rain is of as much use to them in cleansing and invigorating their tender green skins as water is to those men, women, and children who are wise enough to understand and to prize its uses in bathing. The surface of each green leaf is covered with numerous little mouths, by which they feed upon their airy nourishment, or drink in the showers. On a single square inch of the leaf of the common lilac tree, 120,000 of these mouths have been counted by the aid of the microscope. They become languid and clogged up with dust, and thus water not only quenches their thirst, but, washing the dusty surfaces of the leaves, it cleans these little mouths, so that with fresh vigour they can suck in new nourishment.

The human body has two skins. Like the leaf, the outer skin or cuticle is formed of millions of little mouths or pores, but unlike the leaf, they are not freely open to the air. If they were so, the body would take into itself all sorts of poison; there is, therefore, situated between the cuticle and the true skin a gland or tube, which provides oily matter to bedew the surface of the outer skin, which does not prevent things from going out, though it prevents things from coming in too freely. This oil catches hold, therefore, of dust and impurity, and cements them into an oily layer or varnish of dirt, which is also assisted and thickened by the dregs of the perspiration which escapes into the air by small tubes, and leaves behind it a little collection of animal and saline matter. Still further is it aided by the cells of the cuticle, which, as they lose their liquid contents by evaporation, flatten into thin scales, which wear off in powder, and are replaced by new growths from below. If this crust of dirt be not punctually and thoroughly removed, it will obstruct the mouths or pores, choke up the drains, arrest free perspiration, render the oily system sluggish, and, of course,

seriously interfere with the health. The derangement of the oily system produces a strange and unpleasant external result. The contents of the oil tubes not being able to escape freely, are choked up in the passages, and form little pimples, within which the microscope has revealed an animalcule called "the animal of the oily product of the skin." Let us, then, not only put into practice, but do our best to induce others to put into practice, the daily abundant use of water, in order to restore the loaded and impure skin to a free healthy state, and to banish these living and disgusting tenants. Water alone will not be sufficient, as oil is the basis of the coating of dirt ; soap is needed to make it dissolve freely in water.¹

It is true that baths may not be within the reach of all, but a wash-tub, a sponge, soap, fresh water, and a hard towel, are not expensive luxuries. You will confer a benefit, indeed, on your pupils if you can make them intelligently understand, and diligently practise, the use of bathing for themselves and their children. A cold bath every morning, or even twice or thrice a week, will take little time, cost nothing, and produce an amount of comfort, healthiness, cheerfulness, and even self-respect, of which those have no idea whose principal idea of washing, from year's end to year's end, consists of a hasty "wiping" of face and hands. Such unhappy people wonder at their depressed spirits, eruptions of the skin, aptitude to catch cold, and craving for stimulants. The simple remedy of washing is what they need, to restore tone to their systems, purity to their skins, and buoyancy to their spirits. Children especially ought to have their hair kept short, to be washed all over every morning, and rubbed very dry with a hard towel ; in winter, a little warm water and salt may be added if they are delicate.

IV. *External Cleanliness.*—Cleanliness of person is not all that is to be aimed at. Each member of a family may be well washed and rubbed every morning, yet disease, which is only another form of dirt, may be hovering all around. The dunghill at the very door (too frequently seen in Scotch villages), the ill-aired and noisome common stair, the dirty court or narrow street, are all giving rise to evil and noxious influences, which even the well-washed, though stronger to resist, may finally sink under. This

¹ Youman's *Handbook of Household Science*.

then is the time for the intelligent active woman to step forward, and say, "These things shall not be ; I speak for the lives of myself and my children ; dirt is disease, and disease is death." By a little friendly influence, aided by a pair of active hands, and a good-humoured tongue, she might probably persuade the neighbours to help in getting the court and pavements before the doors eleansed and repaired, the stair thoroughly serubbed once a week, and all nuisanees removed and prevented. If she should fail, however, let her call in the police, and iusist on help in performing those duties upon which depend so much of the health both of mind and body. "When the house ceases to be a sty, and possesses the conditions which render it capable of being made a house, then, but not till then, may it receive with some hope of benefit the schoolmaster and the minister of religion."¹

Houses should be whitewashed once a year, and also common stairs. If all the inhabitants would unite in doing it, the expense would be merely for the lime : it ought to be done with a proper brush for the purpose, which would last for many a whitewashing. This is said to be a good and cheap recipe : "Put half a peck of lime into a tub, pour in some water by degrees, and stir it well with a stick that is broad at one end. When the lime and water are well mixed, and are of the thickness of mud, strain it through a sieve into another vessel, when it will settle to the bottom ; strain off the little water that remains at the top, and when you are going to use it, mix it up with cold water to the thickness of thin paint. The house will be quite dry in two hours, and may then be seoured."

There is a valley in the island of Java, known by the name of the "Poison Valley," which is filled with a poisonous gas, which no living being can enter without death being the penalty. It is covered with the skeletons of human beings, tigers, pigs, deer, and birds ; a fowl thrown into it died in a minute and a half, and a dog in seventeen minutes.² This sounds startling and awful, yet the poison that is abroad in the closes, courts, and narrow streets, in which are gathered many of our Scotch and English homes, is as sure though slower in its deadly work.

V. *Ventilation*.—In order that you may impress upon your future pupils the necessity of this important element of health, it

¹ Dr. Southwood Smith.

² Professor Johnston.

will be necessary that you should know something of the nature of that pure atmosphere, which the object of ventilation is to admit into the home, while that which has been rendered impure is banished from it. The meaning of the word 'ventilation' is derived from the Latin word for 'wind.' Our earth is surrounded by an atmosphere of air, which, though we can neither see, nor taste, nor grasp it, yet is in reality a heavy substance. Upon every square inch of the earth's surface weigh about 15 pounds of air. The surface of a man of ordinary size exhibits about 2000 square inches, so he has a weight of 30,000 pounds of air upon him, which would crush and injure him if it were not for the air within the system, which exerts an equal outward resistance. The atmosphere is considered to be 45 or 50 miles high, but the heavier part is close to the earth, and it rapidly becomes thinner and lighter in ascending—so much so that people experience great difficulty in breathing on the top of high mountains. The most important substances of which the atmosphere is composed, are these :—

1st, Oxygen ; a kind of air or gas without colour, taste, or smell. It is so important that were it withdrawn we could no longer exist ; without it we could have neither light nor heat from coal, wood, or other substances of the same kind. In pure oxygen, that is, without the other substances which compose the atmosphere, a candle burns with increased brilliancy, and at first animal life breathes in it with intense delight, but it quickens circulation, produces excitement and fever, and finally destroys life.

2d, Nitrogen ; a kind of air resembling oxygen in its freedom from taste, colour, and smell ; but a lighted candle is instantly extinguished in it, and animals cease to breathe when it alone is inhaled. It is not, however, poisonous, and death is produced rather by the *want* of what is necessary for life.

3d, Carbonic acid, which is colourless, but has a slight smell and a sour taste. Burning substances are extinguished, and animals die when introduced into it. There is but a small proportion of carbon in the atmosphere, for this wise reason, that it is poisonous to animals. It is, however, as necessary to vegetable as oxygen is to animal life ; if there were no carbonic acid at all, vegetable life would cease.

4th, Watery vapour, or the steam sometimes visible, sometimes invisible, which ascends from all surfaces of water, becomes

part of the atmosphere, and is necessary to the life of plants and animals. A living plant consists of water to the amount of nearly three-fourths of its whole weight, and a human being weighing 154 lbs. contains 116 lbs. of water. These bodies would therefore dry up and perish without the necessary supplies of moisture from the air. The many millions of little plant-mouths, which I have already described to you, are now brought into full action : during the daylight, they greedily suck in their favourite food, the carbonic acid from the surrounding air ; but during the night they give off the carbon and drink in the oxygen, which is the reason that plants are detrimental to health when in a sleeping apartment ; they only permanently retain carbon, however, again giving off the oxygen in sunlight. You may see this by a simple experiment. Put a few green leaves under a large glassful of fresh spring water, set them in the sunshine, and you will see small bubbles of oxygen gas rising from the leaves, and collecting in the upper part of the glass.¹

Although three of the principal substances of which the atmosphere is composed cannot be breathed alone without destroying or endangering life, yet so beautifully combined and arranged are they, that the air which is thus formed is one of the most blessed gifts of the Creator. Animal life is so constituted, however, that it is for ever rendering impure this fresh and healthy substance. It is a mistake to think that the living man is all life, and only the dead man corruption and death. In life there is death. Decomposition is constantly going on in the living bodies, even of the youngest, the fairest, and the healthiest,—the difference being that after death it cannot be breathed or expelled as in life. Streams of animal putrescent matter are perpetually exhaling from each living animal ; the fluid thrown from the skin by insensible perspiration, and from the lungs by breathing, contains not only the poison of carbon, but of decomposing animal matter. There is an apparatus within the living man for blowing away these poison vapours which gather in his frame—the apparatus of breathing. The current of air which thus circulates within dispels into the external atmosphere the vapours of decomposition, and drinks in healthy oxygen ; but when death stops the breath, there is no further escape, and total decay of the whole body is the result.

It is stated that the odour of the air at the top of the ventilator

¹ Professor Johnston's *Catechism of Agricultural Chemistry*.

of a crowded room is so bad, that it is dangerous to be exposed to it even for a short time. If an inhabited bedroom, with closed windows and without a fireplace, be entered in the morning, there will be sufficient proof of what I have stated, in the noxious condition of the air ; if it has been inhabited by two persons there will be present about a pound of watery vapour, loaded with latent animal poison. In some of the fearfully ill-ventilated apartments where three or four poor people are congregated, this poison is so strong that if a bird's cage with a living bird within it be hung up within the roof of the bed, the bird will almost to a certainty be found dead in the morning.¹

How then is this great evil to be met ? The importance of being much in the fresh air is manifest. Even those whose work keeps them within doors greater part of the day ought to make it a point of duty to be as much in the air, before or after work, as possible. Another expedient, when weather permits, is to encourage the habit of sitting with open windows ; work, whether mental or mechanical, will go on much better when the pure oxygen enters the lungs and brightens the eyes. Headaches will be relieved, and, by hardening the system, colds and rheumatisms may be prevented, provided there are no draughts. In cases where this cannot be allowed, from delicacy of health, much may be done by keeping the rooms thoroughly well aired when empty of their occupants. Never let the last person leave the room without throwing up all the windows, and even in a short time the air will be changed and good effects produced ; especially ought this to be the case with bedrooms, and the beds ought never to be made till the window has been open for half an hour, and the sheets thrown back and thus relieved by the pure air from the poisonous exhalations of insensible perspiration.

Besides all this, however, there must be some regular modes of ventilation, so that even where windows and doors are shut, there shall be an escape for the impure air, and an entrance for the pure. We have before learned one or two lessons from the plants, let us now see and learn the necessity of ventilation from the bees. They live in a close, crowded house, without a window, and with but one door. They need to breathe, they do not like poison, and they are not lazy. You may hear a constant humming or fanning in the hive if you bend down your ear to listen. There is a strong

¹ *Fever Poison*, a Tract by Robert Pairman.

steady draught of air going on within, so that a piece of thistle-down is blown away from the door. A row of steady industrious bees are flapping their wings backwards and forwards without a moment's pause, holding on to the floor with their feet, and as they tire, others supply their place, for *ventilation* is part of the regular work of that well-ordered home.¹ Wherever there is a fire there must be some degree of ventilation, for where there is combustion in a stove or fireplace, a stream of air must pass out of the room up the chimney; but as this is taken from the purer air on a level with the fireplace, no good is done to the mass of polluted air which always ascends towards the ceiling, and when forced down again, is re-inhaled by the unfortunate inmates. It is a good plan, therefore, to have an opening in the chimney near the ceiling. In order to prevent the entrance of that unseemly visitor Smoke through this aperture, there ought to be fitted into it a chimney valve, which costs from four to five shillings. It is not enough to allow the impure air to escape, however; we must also secure the entrance of the pure, which may be done very cheaply and securely by placing a sheet of finely perforated zinc instead of a pane of glass in the upper part of the window farthest from, but if possible opposite to the fire: the air entering in small streams will mingle with the warm air, and there will be a gradual and imperceptible change in the atmosphere of the apartment.² If nothing better can be done, a row of gimlet holes may be bored through the upper part of the bedroom window-frame, sloped downwards to prevent the rain from entering. Other holes might be bored in the lower part of the frame also, and if too much cold air should be found to enter, a few pegs of wood might be kept at hand to close some of the holes.

Where gas is burned, ventilation is all the more necessary, for in proportion to its brilliancy, it generates poison, which is added to the already loaded atmosphere.

I will conclude this section by a few strong words written by a clever surgeon upon this subject:—

“A necessary consequence of bad ventilation in the home is bad morality, and a strong temptation into the paths of vice. In other words, fresh air is not only conducive to health and vigour, but to virtue and religion. For without pure air, the richest food

¹ See *The Worth of Fresh Air*,—one of an admirable series of *Household Tracts for the People*, published by Jarrold and Sons, 47, St. Paul's Churchyard, London.

² *Tegetmeier's Manual*.

cannot nourish, the carbon of the blood cannot burn, consequently impurity of air induces thinness and coldness of blood. Coldness of blood creates shivering and discomfort, and these again a craving for something that will light up throughout the body a feeling of warmth. The intoxicating cup readily presents itself, and for the sake of its short-lived genial glow, many, alas! yield themselves to its fatal spell. So true is it that all efforts to improve the working-classes, must comprehend improvement in the construction of their dwellings,—that cleanliness is the handmaid of temperance and religion, and that sanitary reform, conducing alike to elevate the tone of public health and public morality, is not more a philanthropic act than a Christian duty.”¹

VI. *How to escape Fever Poisons.*—This is but a sequel to the foregoing sections. In a properly chosen, well-lighted, well-aired, well-scrubbed dwelling, with thoroughly washed inmates, there is comparatively little fear of infectious poisons. But it is well for every one to be acquainted with some of the easiest means of resistance and of escape, when that gigantic evil approaches, or when duty compels us to go within its range. Knowledge of the reality will prevent foolish exaggerations, and diminish useless fear.² All infectious fevers (typhus, scarlatina, small-pox, &c.) arise from the reception of a subtle poison into the blood, which, spreading through the system, is exhaled from it principally by the skin and lungs. This poison has been actually condensed out of impure air poisoned by filth and decay, and appears in the form of a dirty-looking half solid, half fluid, half gelatinous stuff, a few drops of which inserted into the veins of a dog, will inoculate that dog with typhus fever. Mercifully there are two safeguards against the infection of this poison.

1st, It is lighter than air, and ascends: if we allow it to escape at the top of the room, the air below is safe. This is the reason why in fever wards few cases of infection occur,—without the ventilators in the ceiling, they would be dens of death. In 1847, typhus fever raged so fearfully in Glasgow, that the fever wards were overcrowded, and more poison was produced than the

¹ Mr. Pairman of Biggar.

² I have abridged the following remarks from an admirable tract upon fever poisons, by Robert Pairman, surgeon, Biggar, which, along with the rest of the series, is recommended by Dr. Macfarlane, Dr. Ritchie, and Professor Easton of Glasgow, and by Professor Syme, and Dr. Brown of Edinburgh.

ventilators could carry away ; the malignity and mortality therefore became frightful. A large wood-shed was fitted up for a temporary hospital ; the wind and the rain and the soot entered it through large chinks and openings in the roof ; there the disease at once became milder, and the proportion of recoveries increased. The benevolent were much disturbed at the state of the building, and had the apertures stopped up ; at once the mortality recommenced, and did not stop till the wind, even with its accompaniments of soot and rain, was again allowed free entrance ! The circulation of fresh air in a fever chamber by open doors and windows must therefore be produced several times a day (care being taken that the patient be not directly exposed to the draught), or still better, let the upper part of a window be kept permanently open, and if the patient be in a box-bed, let there be several holes bored through the roof of the bed, to allow the exit of infectious vapour in the direction of the open window.

2d, A person may breathe infection a thousand times over without any bad results ; the poison is innocent unless it enters the blood. The thin delicate skin of the lungs, composed of minute cells, is an active absorbent, and whatever is inhaled comes in contact with the absorbing surface, and is liable to pass into the blood. A medical man may be exposed to infection ninety-nine times with impunity, but on the hundredth occasion the absorbent vessels may be peculiarly active, they suck in the poison, and he falls a victim. When the pulse is weak, absorption is strong and active, —when the pulse is strong, absorption is weak ; regular and nourishing food and fresh air will, therefore, diminish the risk of the poison entering the blood, while want of sleep, and fasting, and impure air, will of course greatly increase it. Cold, damp, and shivering chilliness, also produce debility, which will render the absorbing vessels active ; the use of flannel next the skin is therefore of the greatest importance. It is stated that the ancient Italians who lived near the poisonous Pontine marshes of Italy, suffered less from fever than the moderns, as they wore warm and fleecy clothing, and that now the evil has been greatly arrested by flannel again coming into use. Labourers in such places fall victims in great numbers, unless this precaution be adopted. Fear is also a fruitful source of infection, for it weakens the pulse and the whole frame. Travellers in the East have told that when a dog is suddenly bitten by a rattlesnake, the wound is not considered half so

deadly as when the dog has seen the reptile, and stood trembling before it ; fear in this case aids and quickens the poison. Charms and amulets, met with occasionally among the poor of our country, and frequently in foreign ones, may thus actually be useful by inspiring confidence, although it is the confidence of superstition. How much need to possess ourselves of the amulet of trust in Him who can keep us safe from the "pestilence that walketh in darkness, and the destruction that wasteth at noonday !" A so-called confidence in God, however, while we disobey His will by neglecting means which He puts within our power, would only be another form of superstition. There is much wisdom in the beautiful old proverb, "God helps those who help themselves."

When infection is not destroyed or dispersed by proper ventilation, it adheres to articles of furniture, but especially to cotton and woollen material, and everything must be done to secure its dispersion by *ventilating* these also. They should be exposed to a free current of air, or steeped for twelve hours in cold water before washing, and not folded up for some time. Black or dark substances absorb infection more easily than white—light dresses are therefore safest for nurses, and hence too, one of the advantages of white-washing in the dwellings of the poor.

"Finally, attending to these simple precautions, go boldly forward when duty calls, without the slightest fear. To appropriate means God never fails to add His blessing, and the same hand which guides the thunderbolt, guides also the tiny shaft, and tells the atom where to strike."

CHAPTER III.

WHAT DO WE EAT ?

THE subject of food is an important one, both physically and morally : the nature and preparation of that which is to give its fullest vigour to the body of man, must necessarily be considered as an interesting branch of "domestic economy" in its highest sense. Whatever helps to prevent disease ; whatever makes the home pleasant and its fare palatable ; whatever lessens the craving for the public-house, and the wild-fire which destroys but does not nourish ; whatever puts to the right use the right things which God gave to be used and not abused, must be worth the most serious and attentive consideration of women, especially those who are to be responsible teachers of such things. Too often, however, women save themselves the trouble of cooking altogether. The wife of the labouring man has a shilling in her pocket, and goes out to her shopping for the day's dinner ; she buys a couple of bottles of beer, and a bit of butter, and some bread and cheese ; the shilling is spent, the food is all finished that day, it has given no comfort and little nourishment, but "a deal of trouble" has been saved, or, in other words, the wife has not employed herself in a useful and womanly manner. Let her, instead of doing this, buy threepence-worth of the parings and fragments sold cheap at the butcher's, and twopence-worth of vegetables, and make them into broth. This, with the meat in it, will give the husband a hot and wholesome dinner, leave a little over for the children, and sevenpence of the shilling besides. Would not this be a useful and easy lesson to teach and to learn ?

Not only should the food be cooked, however ; it should be cooked in the best possible manner, and with the greatest variety. Food is a gift of God, and He intends it to give enjoyment as

well as nourishment. Why, then, should not the working-man enjoy his dinner as much as the rich man, who has not laboured for it ? The reason that he does *not*, is because working-women will not take the trouble of learning the different modes of preparing equally cheap but far more savoury dishes than those which compose their present careless dinners ; and this neglect, though it may seem a little thing, is one of the chief causes of that want of household comfort and proper female influence, of which I have before spoken. Even in the Bible we find allusions to the impropriety of neglecting the proper preparation of food : “ The slothful roasteth not that which he took in hunting, but the substance of a diligent man is precious.”¹ At a reformatory for young thieves, the manager was asked what he found to be the chief cause of crime, and he answered, “ Early indulgence of the stomach,” extreme greediness being the characteristic of the class. The mothers who would not be at the trouble to provide wholesome, pleasant food for their children, would “ fill up the corners,” after a bad dinner, with cheap unwholesome sweetmeats, bull’s-eyes, lollipops, bad apples, and the like, thus causing a constant craving which, when there were no other means of satisfying it, made them steal, and we know how the first small step leads on with gigantic strides to all evil. Apparently easy as it would seem to persuade each woman of the importance and the interest which attaches to the subject of the proper preparation of proper food, it is by no means a light task to overthrow the habits of a lifetime. There is a district of England where, as in many other parts of the country, bread, butter, and tea used to be a very general dinner for father, mother, and children of the working-classes,—insufficient nourishment and great expense, but considerable saving of “ trouble” to housewives. The good clergyman of the parish was tired of giving advice on this subject, so he determined to prove the possibility of living in a very different and much more comfortable, as well as economical way. He accordingly asked four grown-up people and eight children to stay with him for six weeks ; they breakfasted, dined, and supped with him, for he was determined to fare just as they did ; their food consisted entirely of cheap dishes, the receipts for many of which you will find in the Appendix ; they helped to cook them, that they might afterwards know how to do so at home. The people said they had never lived so well

¹ Prov. xii. 27.

before, and each had as much as they could eat three times a day, and the cost for thirteen people was always under sixteen shillings a week : those were cheaper times to be sure, but even now the cost would be very much less than that of uncooked diet. When the clergyman took leave of them, he said, " Now, you have seen what economy is, and how to live on soups, and stews, and puddings ; don't let me catch you at your bread, butter, and tea again." A fortnight after, he dropped in at dinner-time upon one of his visitors—and there were his old enemies, bread, butter, and tea !¹ Idleness had gained the day.

It is, therefore, with the young that we have most hope of success. If the right knowledge be implanted before the weeds of bad habit have grown up strong and thick, it will probably bear good fruit. The wives and mothers who learn domestic economy from you in their youth will, if God give His blessing upon your conscientious and intelligent teaching, keep happier homes and cook better dinners than those who have only read books and listened to charitable ladies after they were established in contrary habits.

Let us first consider the character and properties of the different kinds of food. All materials for food, whether animal or vegetable, are principally constituted of four elements, carbon, oxygen, nitrogen (our old friends of the atmosphere), and hydrogen, a very light substance, lighter than air, which along with oxygen forms water, and which is the great agent in combustion ; these four are called organic elements, because they are necessarily present, while others that are found in some and not in all, such as soda and potash found in some plants, and phosphate of lime, an ingredient in the bones of animals, are called inorganic elements.

Carbon, hydrogen, oxygen, and nitrogen are supplied to the animal life from the secretions of the vegetable substances which form its nourishment. These secretions are *gluten*, the principle of nourishment contained in wheat, oats, barley, or which is identically the same as fibrin, the nourishing substance found in animal flesh ; *albumen*, the same substance that forms the white of egg ; and *casein*, the principal substance found in milk, from which it is separated in the form of cheese. These are called nitrogenous

¹ The Rev. Henry Newland, editor of " Cottage Economy, by a Cottager,"

or nutritious secretions, because in addition to carbon, oxygen, and hydrogen, they contain nitrogen, and serve principally for the *nutrition* of the body of man, supplying the daily waste that goes on within it. There is a second class called *carbonaceous or combustible secretions*, the most important of which are *starch, sugar, and oil*, all of which are found in the products of the vegetable kingdom, and therefore more or less in the composition of animal life. They contain carbon, oxygen, and hydrogen, without nitrogen : these three elements produce heat or combustion ; so that food is the means of maintaining heat, thus keeping up the temperature of the body to ninety-eight degrees, as is found to be the case in health, even while the external air is cold. The destruction of food within the body is nothing more than combustion, or a slow, silent, regulated burning in the blood, and in the different chambers of the frame. It is a slow and gentle furnace, however, not enough to produce light and flame, like common fires. When it burns too quickly, the body gets into a fevered state, when it burns more slowly the body is chilled and depressed ; the fuel, too, is constantly fanned by the play of the lungs in breathing, and when the breath is stopped the fire goes out, and the body is in a swoon, or dead. In the body of a healthy man there is as much heat as would serve to boil eighty pints of cold water. All food is capable of being burned, but that which contains nitrogen offers much longer resistance, and, therefore, much more of its substance goes to form tissues, and to build up the frame, than that which is soon and easily consumed.

Before going on to the enumeration and consideration of the various articles of diet given to us by a beneficent Creator, it is necessary to speak of the treatment which food ought to receive even after being properly cooked. It ought first to be well ground in a powerful mill, possessing many pairs of hard stones ; the mill is called the *mouth*, and the stones are called *teeth*. There it ought to be made into a kind of paste, by means of a liquid which is poured out from little taps, laid on in the mill or mouth, and called the saliva : if people “bolt” their food, or swallow it half chewed, it will not be in a proper state for the next process of change, or digestion ; and great inconvenience is often caused thereby to the different workers of the busy stomach or digesting bag, in which, however, we will suppose a properly-made paste to be

deposited. More liquid is poured on it there, called the "gastric juice," which contains a good deal of acid.¹ It then undergoes a great deal of exercise, being well shaken up or churned by the stomach, which tightens and relaxes its muscular bands, so that the food is moved round and round two or three hundred times. A Canadian soldier, named St. Martin, received a gun-shot wound in his side, which, after healing, left a permanent hole, so that the doctors could see the churning going on—a sight never before seen. They found that in a few hours it has become quite a soft pulp, and a little door being opened, it goes into the bowels to be mixed with another liquid called bile or liver juice. The pulp then consists of two things, a white liquid, like milk, which is the rich and nourishing part of the food, and the coarse part, which could not be digested, and is therefore rejected as good for nothing. This milky essence is then sucked up by a number of little holes or mouths that are in the lining of the bowel, from whence it is carried by tubes into a great channel running upward to the heart; thus the food mixes with the blood, where it acts as we have seen as fuel to warm as well as matter to nourish.²

Let us now consider—I. The Cerealia. II. Animal food. III. Common vegetables. IV. Spices. V. Fruits.

I. The Cerealia.—The chief corn plants or cerealia, are wheat, rye, barley, oats, millet, rice, and maize. The native countries of wheat and barley are unknown, that of oats is likewise doubtful; rice is of Asiatic origin; maize is American, and millet is supposed to be a native of India. The highly nutritious substance of gluten, or fibrin, is found in these plants in great abundance, but they also contain starch. Wherever corn plants are found, as they require much labour and culture, we may pronounce that in that region man is in an advanced state of civilisation. Grains of wheat a thousand years old, were found in closed vessels in the Egyptian Pyramids, thus giving us an insight into the habits of food and industry, of the ancient Egyptians.

It is curious and instructive to observe what great results of blessing and civilisation have sprung from small and apparently

¹ Sometimes when this acid is deficient in quantity, and digestion thereby impaired, lemon juice or vinegar, taken alone or mixed with the food, is of great use.

² Taken partly from a tract called *The Value of Good Food*.

accidental causes. A slave of Cortez, in 1530, discovered three or four grains of wheat accidentally mixed with a quantity of rice ; he carefully preserved these, and so good a use did he make of them, that they were the beginning of the wheat harvest in Mexico : his name has not been recorded. A Spanish lady, Maria d'Eseobar, took a few grains of wheat to Lima, and thus secured the same blessing to the more grateful Peruvians, who have carefully preserved her name.

Agriculture was highly honoured among the Chinese ; one of their emperors, who was celebrated for his wisdom, was taken from the plough to the throne,—another gained great renown for discovering the art of draining low lands, and employing the water for the purposes of irrigation. The Emperor Venti, who reigned 179 B.C., is said to have ploughed with his own hands the ground round his palace, in order to incite his subjects to a more diligent cultivation of their land. An interesting story is told by Pliny of Ctesibius, an ancient Roman agriculturist, who was brought before an assembly of the people, to answer to a charge of sorcery, founded on the larger crops he obtained from his small field, than his neighbours did from their larger ones. In answer to this, the accused brought forward his well-kept implements of husbandry, his well-fed oxen, and a strong young woman, his daughter, and exclaimed, "These, O Romans, are my instruments of witchcraft ; but I cannot here show you my labours, and sweats, and anxious cares."

The greatest blessing which the cerealia have bestowed upon man, is their formation into bread, the "staff of life." All the corn plants are capable of being made into this nutritious food, but wheat is reckoned the best and most nourishing, and is the most common form of it. When the grain of wheat is crushed between the stones of the mill, it is separated into two parts,—the bran is the outside harder part of the grain, which is more difficult to crush, and which darkens the colour of the flour ; it is therefore sifted out by the miller, and used for other purposes. If the flour be mixed with a little water, it will form into a smooth, slightly elastic substance, called dough ; if this be placed upon a sieve, or a vessel covered with a piece of muslin, and worked with the hand, under a stream of water, there will at last remain upon the sieve, a white sticky substance, very like bird-lime—that is gluten or fibrin ; when the water in the vessel has become clear by stand-

ing, a white powder will be found at the bottom—that is starch. The same process may take place, and the same result will happen in a greater or less degree with all the corn plants. Bran, which is the part separated from the fine flour, is the most nutritious part of the grain, and the plan is now much adopted of leaving the bran, and making bread from the whole meal, as it is much more nourishing and wholesome. Some people prefer a still browner bread, with but a small proportion of fine flour, and as the bran contains a larger quantity of gluten, it is proportionably more nutritious than even the whole meal. Coarse bread is likewise reckoned more wholesome by the presence of the woody fibres of the bran, which act mechanically in dividing and separating the mass of food, thus rendering it more easily penetrated by the solvent fluids of the stomach. The meal of Indian corn possesses more oil, and is therefore more fattening, than any of our common grains. It does not keep well, and cannot be made into fermented bread, but it is excellent and nourishing in the form of cakes and puddings. A great deal has been said in times of scarcity, of making rice bread, but it has never thoroughly succeeded. It may be mixed with wheat or rye-flour, but even then it is generally heavy, and soon becomes harsh and dry. Rice is, however, a most useful and economical grain for domestic cooking; at least a pound of it should be allowed in the weekly household expenses of every cottage: it may be used for puddings, soups, and rice-milk.

To bake at home is far less common in Scotland than in England, in the households of working people. It is a decided saving of expense, even counting the cost of an oven; and much more nourishment is given by home-made bread, than by baker's bread, which is often much adulterated with alum, and other unwholesome substances, to make it white, and to fill up the place of good flour. The best kind of oven is the regular built brick oven with a circular interior and covered roof, not higher from roof to roof than twenty-four inches; the mouth should be small, and the iron door ought to fit quite closely. There is an iron oven, however, often included in cottage kitchen-ranges, which is heated without an additional fire, and it answers very well, not only for baking meat, pies, and puddings, but also for bread upon a small scale. Even the American oven, which costs only a few shillings, and can be placed before any fire, will bake one tolerably large loaf at a time.

Before giving you some good receipts for bread-making, I must tell you something of the nature of yeast, the curious substance by means of which flour, salt, and water, are formed into light, pleasant, wholesome bread. Did you ever see yeast, when brought from the brewery ? It is a yellowish grey, or fawn-coloured frothy liquid, with a bitter taste : when fresh it is in constant movement, and bubbles of gas escape from it,—when dried, it shrinks in a few hours into one-fourth of the space it occupied at first, becomes solid and horny looking, and breaks easily into grey or reddish fragments. You will be astonished to hear that yeast is a plant ! For many years no one knew exactly what it was, but at last, a powerful microscope discovered the little vegetable cells and stems of a plant, belonging to the Fungus tribe : it is supposed to be produced by the fermentation of grain. Yeast can, however, be made in other ways when there is no brewery near. Here is a receipt which a friend of mine used for twelve years without one failure.

Boil one ounce of hops in a quart of water until the liquor is half wasted, then pour it boiling hot upon half a pound of flour ; let it stand till nearly cold, then put it into a stone bottle, with a little old yeast, and let it stand by the fire for an hour when it will be ready for use. Keep the bottle in a cool place in summer.

Preparatory to baking, you must pare, boil, and mash six potatoes, mixing them with a pint of yeast ; let it all stand by the fire for half an hour. Take one stone of flour, put in the yeast, and sufficient water (lukewarm), or milk, to make it like a firm batter ; knead it very well ; sprinkle some flour over the sponge, which should be mixed in a wooden vessel ; cover it over with a thick cloth, and let it stand rather near the fire from eight o'clock in the evening till four next morning, then mix a little more flour with it, put it into the baking pans, and let it stand for some time again before the fire to rise, before putting it into the oven.

A receipt for making a 4-lb. loaf.—Take 3 lbs. of good flour, $1\frac{1}{2}$ pint of lukewarm water, nearly $\frac{1}{4}$ pint of yeast, one tea-spoonful of fine dry salt, having ready a tin, or trough, into which place almost all the flour, which should be well mixed with the salt ; then make a hole in the centre of the flour, and pour in the yeast, after which, have the water ready, and pour it gently in, all the while stirring it round, to mix the flour, yeast, and water together. When it is well mixed and lightly kneaded, some dry flour should be sprinkled over it ; and being now in the form of a stiff batter,

and a plate put over the trough, it should be left in a warm place, in which it may remain about three hours. At the end of three hours, if the sponge begins to crack, or when it has wide cracks in it, it is time to carry it to a table and knead it, taking care to do it lightly and quickly, because if done slowly and roughly, it will not rise so well, neither will it be so nice and light when baked. In the kneading, the remainder of the flour may be used in sprinkling it over the dough, and in rubbing the paste from the hands ; when this is done, the tin in which the loaf is to be baked, having been previously placed near the fire, should be floured, to prevent the loaf from sticking to it in the oven ; when this is done, the loaf, having been made the proper shape, should be put in the tin, and then placed in the oven, the fire of which should not be too brisk, nor too low, but should be kept at an equable degree of heat. While the loaf is being baked, if the fire be too hot, the loaf will burn without being properly done, and be very unpalatable ; if not hot enough, the loaf will be sodden, and consequently indigestible. It will require about two hours' baking.¹

A cheaper and equally wholesome way of making bread, is by mixing potatoes with the flour. To two gallons and a half of flour, add three pounds of potatoes ; after boiling and peeling the potatoes, they must be broken and rolled, or kneaded with a large spoon till perfectly fine ; the flour, potatoes, and all should be carefully mixed together, and the rest of the process is the same as above.

Sometimes there is a little temptation to extravagance on the "baking day" in cottage homes, when there seems such a quantity of loaves,—and crusts and good pieces of bread are occasionally thrown away. If any such are left over, it is an excellent plan to soak them a good while in milk, mash them up, and salt them, and then place them before the fire or in the oven ; when ready, butter them like toast, and they will be as good as a cake.

To eat new bread is a very extravagant indulgence ; it is so much more palatable, that double the quantity is consumed,—and many people consider it very unwholesome. A "baking" should never be begun upon, till the second day at the soonest ; it will last twice as long in this way.

¹ See Miss Burdett Coutts' Prizes for Common Things.

II. Animal Food.—The different kinds of flesh used in this country, are beef, mutton, pork, veal, and lamb ; the two former being the most nourishing and digestible. Animal flesh consists of fibrin, the same nutritious substance that is found in corn plants ; fat ; the juice of the flesh, consisting of water and blood ; albumen found in the flesh, and also in the blood ; and gelatine, a substance which is found in the bones and sinewy parts, and which forms a jelly when cold, after being boiled in water. The principal difference between beef and bread is that, 1st, there is not a particle of starch in the former, which forms so large a proportion in the composition of vegetables ; and 2d, that the proportion of fibrin in flesh is about three times as great as in ordinary wheaten bread, so that a pound of beef-steak is as nutritious as three pounds of wheaten bread, in so far as nourishment depends upon this one ingredient.

The advantages of a properly mixed diet are very great. Food ought to contain a due admixture of vegetable and animal substances—of nitrogenous and carbonaceous elements—so that there may be right proportions of the three most important, viz., fat or oil, starch or sugar, and fibrin or gluten. Variety in food is pleasant as well as wholesome, and therefore ought to be carefully studied by the wise housewife, for it is well that those belonging to her should be able fully to enjoy, and to appreciate the gifts which are intended to promote happiness and comfort as well as health.

Boiling, roasting, and baking, are three of the most general ways of cooking meat. The first is by far the most economical, as you will see from this table of the comparative loss in the three ways :—

	In boiling.	In baking.	In roasting.
4 lbs. of beef lose .	1 lb.	1 lb. 3 oz.	1 lb. 5 oz.
4 lbs. of mutton lose .	14 oz.	1 lb. 4 oz.	1 lb. 6 oz.

The great object in cooking a piece of meat is to have it full of its own juice or natural gravy. You will remember that the presence of albumen, or a substance resembling the white of egg, was noticed as existing in the flesh and juices. When quick heat is first applied to a piece of fresh meat, the first effect is to contract the fibres, to squeeze out some of the juice, and partially to close up the pores, so that the remainder cannot escape ; the second result is to thicken the albumen, and thus effectually plug up the pores, so that the whole of the internal juice is retained in

its place. This is the reason, therefore, that meat should be roasted at a quick fire, and that when it is to be boiled, it should be plunged at once into boiling water, instead of lukewarm or cold, as the same effect is produced upon the albumen and juices ; when cut up, the meat is thus full of gravy. Hence, too, a beefsteak and mutton-chop must be done quickly, and over a quick fire.

In making soups exactly the contrary method must be employed, for the object then, is to extract as much of the juice as possible : the meat must be put into cold or tepid water, which is allowed to boil slowly. In this way the pores are not quickly closed, the natural juices flow out, and much of the albumen is extracted.

In boiling, a fork should never be thrust into the meat, as by passing into the interior where the albumen is not hardened, it allows the juice to escape. The time allowed for boiling is somewhat less than twenty minutes to every pound : the time allowed for roasting is a quarter of an hour to each pound of meat. Baking is more economical than roasting, and even when there is no oven at home it can be done at small cost by a baker (1d. for a dish on week-days). Frying is not a wholesome way of dressing meat, but it is very savoury, quickly done, and less expensive than broiling. One pound of beefsteak broiled is only enough for one, whereas, fried or stewed, it is sufficient for two. Stewing is a very economical process, as no part of the meat is lost or wasted ; and pieces of joints too tough or sinewy to be used in any other way, may be stewed into a palatable dish. Stewing consists in subjecting meat for several hours to a very moderate heat in a small quantity of water, so that the fibres are gradually softened and separated, and the albumen dissolved.

The application of salt to meat has very much the same effect as the application of a quick heat. It causes the fibres to contract, and part of the juice to flow out ; only if a large quantity of salt be applied, it penetrates so deep that as much as one-third of the juice is often forced out by the contraction of the fibres. The natural flavour is of course much diminished by so great a loss of nutritious qualities, which is the reason why long feeding on salt meat affects the health ; but the pores of the meat are stopped up by the salt, so that the external air is kept out, and liability to decay thus prevented.

There is frequently a great waste of material in cottage cookery, which arises from ignorance of the value of the things thrown away ; many an excellent dinner might be prepared out of the bits of broken meat, fat, bread, and bones, which the careless housewife thinks of no use. A great deal depends upon the knowledge of the cheaper parts of meat. Bullock's liver and heart, or cheek and tails, will all make savoury soups and stews, while trimmings or the small pieces of meat left over after large joints are cut into the proper shape, are sold very cheap, and do quite as well for potato-pies, haricots, and Irish stews, as solid pieces of meat. The shoulder of mutton is cheaper, and contains less bone than either the leg or loin ; the cheapest part of beef is the fore vein, which lies between the neck and the shoulder. It is irregularly shaped, but is free from bone, and is very juicy and excellent when boiled. A shin of beef is generally sold for half price in consideration of the great weight of bone, but it contains more gelatine than any other part of the animal.

It is of great consequence to keep meat a proper time, as when new-killed and tough, it will not give half the nourishment, is indigestible, and makes most unpleasant food. In winter, meat may be hung, either in the home larder, or in the butcher's shop for a week or ten days ; in summer, two or three days will be sufficient.

Fish, when abundant and cheap, forms a very good substitute for butcher meat—indeed, it much resembles lean meat in its proportion of fibrin ; but, with exception of the salmon and the eel, there is a great deficiency of fat, and on this account it generally requires to be eaten with butter or oily substances ; it is very good thus combined, with the addition of bread and potatoes.

Eggs are another form of animal food, akin to flesh and fish. A hen's egg, which is most commonly used as food, consists of three parts, the shell, the white, and the yolk. The shell is composed of carbonate of lime or hard chalk, and is intended as a protection to the inner part. It is penetrated by a number of tiny holes, through which the air passes, and thus the young bird is enabled to breathe. It is by the entrance of air that eggs become decayed ; but if these pores are filled up by the egg being rubbed over with fat, or plunged into thick lime and water, they will keep for a long time uninjured. The white of

the egg is known by the name of albumen, and has a very close chemical relation to fibrin and gluten, and serves almost the same purposes. The yolk consists of a species of albumen, mixed with a great proportion of yellow oil. They are very nutritious, and easily digested when lightly cooked; and a raw egg beaten up with wine or a little brandy is very nourishing for invalids. Eggs are largely used in puddings and pastry, as they make them light and more nourishing.

III. Common Vegetables.—Of these the class called leguminous plants or *legumes*, contain even more nitrogenous matter than the cerealia. The nutritive substance found in their seeds is called casein, which is identically the same as that which is separated from milk under the name of cheese; it is not however easily digested, and therefore, except for the food of the horse and the ox, this class of vegetables cannot be considered so nourishing as might have been expected from the quantity of nutritious matter found within its seeds. The principal legumes cultivated amongst us are the *pea*, *bean*, and *kidney-bean*.

The native country of the common pea is unknown, as it was in cultivation before the commencement of botanical history. In England it was esteemed a great delicacy. During the reign of Queen Elizabeth peas were brought from Holland, and were called “fit dainties for ladies; they came so far, and cost so dear.” At Windsor there is a street called Peascod, mentioned under that name in old documents. The bean has been so long known in this country, that it is supposed to have been introduced by the Romans. The Greeks received it from Egypt as a cultivated vegetable, and it is accordingly supposed to have originated in that country. It is always used in its green state as an edible vegetable, when of course it has much less of the nutritious principle; when ripe and dried, it is used only for horse’s food. There are two kinds of kidney beans—one, the dwarf variety, is called the French bean, but is a native of India; the other, called the scarlet runner, is tall, and has brilliant scarlet flowers. It is only the unripe pod which is used in England, though in France the ripe seeds called haricot beans are a favourite vegetable. The leaves of the kidney bean are boiled, and much esteemed in Nubia as an esculent vegetable.

We now come to the plants which yield only, or chiefly, carbona-

ecous secretions, which you will remember are starch, sugar, and oil. Foremost in this class stands the *potato*. Although an excellent vegetable to be used along with other food, it is very deficient in nourishment when taken as a principal article of diet, its composition being in these proportions :—

Water,	.	.	.	72
Starch,	.	.	.	26
Fibrin,	.	.	.	2

Indeed, it has less fibrin than any other substance used as food, except the turnip. Generally and largely as the potato is now cultivated in our country, its first introduction was comparatively recent. It is generally believed that the English colonists sent to North America by Sir Walter Raleigh in 1584, brought it home with them, and it is well authenticated, that Sir Walter Raleigh was the first to introduce the plant into Ireland, where it is now a staple article of food. It is told that when Sir Walter's gardener at Youghal, in the county of Cork, had reared to the length of "apples" the potatoes which the knight had given to him as a fine American fruit, he brought one of the apples to his master, asking if that were the choice fruit? Sir Walter was, or pretended to be, so dissatisfied, that he ordered "the weed" to be rooted out. The gardener obeyed, and in doing so, found a bushel of potatoes! In France, the use of this plant was much opposed for a long time, and did not become universal till Louis xv. wore a bunch of its flowers at court, which speedily made it the fashion!

In cottage cookery, potatoes will be found most useful, for there are many economical yet savoury dishes which can be made from them, when combined with very small portions of meat or 'kitchening.' It must be borne in mind that the water in which potatoes are boiled has unwholesome properties, so that they must always be partially boiled separately, before being stewed with meat or other vegetables; in spring, potatoes ought never to be boiled with their skins on, as they are then still more unwholesome.

The *turnip* was well known among the Romans, and its culture has spread through all European countries. In Russia it is used as fruit, and in great houses, raw slices are handed about on a silver salver with brandy, to increase the appetite before dinner. It is related that "the king of Bithynia, in some expedition against the Scythians in the winter, and at a great distance from the sea, took a violent longing for a small fish, called *aphy*—a sort of her-

ring or anchovy. The cook cut a turnip to the perfect imitation of its shape ; when fried in oil, salted, and well powdered with the grains of a dozen black poppies, his Majesty's taste was so exquisitely deceived, that he praised the root to his guests as an excellent fish !"¹ There is a great deal of sugar in the composition of a turnip.

The *Carrot* is a useful and wholesome vegetable, and abounds also in saccharine matter or sugar. I remember tasting an excellent jam brought from Switzerland, and sold exceedingly cheap—it was made of earrots ; and earrot pudding is also very good. The *Parsnip*, like the earrot, is a native of Britain ; it is one of the best and most economical vegetables for cottage gardens, as it is easily grown. When slowly roasted it is nearly as good as potatoes, and, when boiled and beat up with potatoes and a little butter, is a favourite dish. Parsnips are very good when cooked whole with salt fish or meat, and any that are left are very nice the second day warmed in the frying-pan. They are wholesome for cows, which yield an abundance of milk when fed upon them. They are also very profitable ; sixpence-worth of seed, well sown and trodden in, will produce more food than four sacks of potatoes, and take up very little room. *Beet-root* was well known in the time of Pliny, the great Roman author, and is supposed to have been brought into this country by the Romans. The red kind is used in England for culinary purposes. It is generally eaten cold in slices with vinegar, after being boiled ; and from one variety, which has a red skin, but is white inside, sugar is made very extensively in France. The white beetroot is very useful for the nourishment of domestic animals.

The *Jerusalem artichoke* is a most wholesome and palatable winter vegetable, and may be grown abundantly at very little cost. It is very hardy, exceedingly fertile, and requires no care. It may be either boiled or stewed for the table, and makes a delicious soup, generally called "Palestine soup : " the name of this vegetable, however, has no reference to the city of Jerusalem. It is of the same genus, and has much the same appearance as the common sun-flower ; and its common name is a corruption of the Italian word for sun-flower, "Girasole," from "girare," to turn, and "sol," the sun.

It is not only the pods and roots of vegetables which are good

¹ Disraeli's *Curiosities of Literature*, quoted in *Food of Man*.

for food. In the leaves, flowers, and young shoots of the following vegetables, besides the carbonaceous secretions, there are small quantities of nutriment in the form of albumen.

The *Cabbage* is a very ancient vegetable, being mentioned in the earliest English records as "kale." The Saxon name for February was "sprout-kale," as then the sprouts began to be fit for use. It was first introduced into Scotland—now the "land o' kail"—by the soldiers of Cromwell. *Cauliflower* and *brocoli* are varieties of the cabbage, and are delicious vegetables, but rather difficult and troublesome to rear. *Brussels sprouts* are better adapted for cottages, as they are easily grown, hardy, and profitable. *Spinach* is likewise a very good vegetable. It was mentioned by the Arabian physicians, a very long time ago, for the medicinal properties of its leaves, which probably brought it first into notice as an article of food. *Asparagus* is a delicious vegetable, but not at all adapted for economical gardening or cooking purposes, as it is only the heads of the young shoots which are eaten, so that any one who eats one head of asparagus eats the rudiments of many hundreds of branches, and thousands of leaves. It is only of late that the culture of this plant has become general. About the end of last century, a Scotch laird, who prided himself upon his general knowledge and great consistency of character, had reached a mature age without having ever seen asparagus. Having met with it at a dinner given in a neighbouring town, he selected the hard white end, and proceeded to chew it with considerable difficulty. It was hinted that he had taken the wrong part, but as he would never confess to ignorance, he declared that it was his way to eat asparagus in that fashion, and for the sake of consistency, he continued to eat the hard end till the day of his death! *Seakale*, like asparagus, can never become a cheap vegetable, as it is only the young shoots blanched with great care and difficulty which are eaten. The *artichoke* is naturally a maritime plant, and is indigenous to the countries which border the Mediterranean, where I have seen it growing wild in great beauty, with its feathery sea-green foliage. It is cultivated to greater perfection in the Orkney Islands than anywhere else; this is said to be owing to the sea-weed with which the ground is plentifully dressed.

The class of vegetables which are bulbous, have in them a large proportion of oil. The *onion* is the most generally known and used in this country, as well as in foreign ones. It was in

general use in Egypt during the Israelites' time of bondage there ; and the "onions of Egypt," for which they ungratefully longed, are still celebrated for their exquisite flavour and delicacy. Onions are considered very nutritious under any form, and make an economical and favourite seasoning for all sorts of soups and stews.

Rhubarb is a vegetable containing a great deal of very wholesome and pleasant acid ; its stalks make excellent tarts and puddings, and are also very good when stewed plainly, and eaten with boiled rice. It comes into use in the early spring when there is no fresh fruit to be had.¹ It takes up a good deal of room in a garden, but is easily cultivated. *Parsley*, *thyme*, and *sage*, are used for flavouring various soups, stews, and stuffings. *Lettuce* and *cresses* are much used in an uncooked state for salads ; the former is also used as a medicine ; its juice having the same effect in producing sleep as opium, in a weaker degree and without the same bad consequences. *Celery* is much used for salads also, and the red variety of it, a coarser kind than the white, is excellent for soups, and stewed as a vegetable. The fibres of the roots of the horse-radish, and the hot seeds of the mustard plant mixed with water, are both used as a condiment or relish ; the first with roast beef alone—the second with any kind of beef ; the latter is of great service also for blisters and plasters for slight inflammatory illnesses.

Tapioca, *arrow-root*, and *sago*, must be mentioned here, although not coming under the head of "common vegetables." They are pleasant and nourishing articles of food, and all contain starch as their principal element ; they make excellent puddings, and when boiled simply in milk, are very good for invalids and children. Tapioca is prepared from the farina or flour of the roots of the cassava, a South American plant. Arrow-root we also owe to South America, though it is much cultivated in the East and West Indies : it is prepared from the root, as the name implies. Sago, like the two others, is a flour or starchy substance, but it is extracted from the pith of a species of balm, which is a native of Asia ; by the action of heat the flour is made into grains, the state in which we buy it, as it keeps better thus than in flour.

IV. **Spices.**—It is a common idea that the hot and pungent oils found in spices, and in some of the seasoning vegetables of

¹ The bitter medicinal rhubarb is the root of a plant of the same species.

which we have been reading, horse-radish, mustard, &c., promote digestion : they certainly quicken the action of the stomach for a time, but if continually used, they generally produce weakness of that organ.

Cinnamon is the dried bark of a tree which grows extensively in the island of Ceylon. The foliage is remarkably beautiful, the young leaves being partly bright red, and partly pale yellow, which afterwards changes to green. This spice is said to possess useful medicinal qualities : a writer upon the subject¹ says, that 92,000 lbs. of cinnamon are consumed annually by the slaves in the mines of South America. Each receives daily a certain quantity, which he eats as a preservative against the noxious effluvia of the mines. The *clove-tree* is a native of the Molucca Islands. The calyx or little cup which encloses the flower, is the part which we see dried ; it is not plucked till the petals begin to fade, and the calyx turns first yellow and then red : it contains the young seed, and is beaten from the tree and dried.

The tree from which the two spices *nutmeg* and *mace* are taken, is also a native of the Moluccas. The Dutch wished, for their own profit, to keep this tree within one of the islands, but it is said that the wood-pigeon was often the means of thwarting this selfish design by conveying and dropping the fruit in the other islands. Nutmeg is the kernel of the nut, and mace is the red net-like lining of the thin black outer shell. *Ginger* is the root of a plant which comes originally from Asia, but is now more extensively grown and is of a superior quality in the West Indies, from whence it is imported both in a dry state and as a delicious preserve. The pepper plant, or “pepper vine,” is extensively cultivated in Malabar, Sumatra, and Java. It is a climbing plant resembling the grape vine, with a leaf like ivy. Black and white pepper are the berries of the same plant ; the best white peppers are supposed to be the finer berries which drop from the tree, and become blanched by exposure to weather : they are picked up by the natives and sold at a high price. The greater part of the white pepper generally used, however, is merely the black pepper steeped in water, and reduced to powder.

V. Fruits.—These exquisite gifts of God, which we use with but little thought of the goodness of Him who has thus provided

¹ Cordiner's *Ceylon*, quoted in the *Food of Man*.

for more than was strictly necessary for our support, are not only pleasant to the taste, from their charming combination of sugars and acids, but exceedingly wholesome, and often medicinal ; while most of them are so cheap, and so easily reared, that there is not a "poor man's garden," that "little precious piece of ground," where several kinds at least may not flourish.

The *Currant*—black, red, and white—is among the most common and most useful for puddings and preserves. The black currant adds to these qualities a medicinal virtue, as the acid of the preserve made from it is peculiarly good for sore-throat. They are all considered to be natives of this country.

There are green, yellow, white, and red *gooseberries*, the delight of every child in castle as well as in cottage ; the small, hairy red kind, is best for jams, but quite unripe gooseberries of any kind make a very nice and delicate jelly : unripe gooseberries are also used for pies and puddings.

Raspberries have a peculiarly delicious but fleeting flavour, except in preserves,—even on the bush the flavour does not continue above two or three days after the fruit is ripe. The raspberry plant requires less attention than almost any other fruit.

Even the wild or wood *strawberry* is pleasant to the taste, but when cultivated it is one of the most delicious and wholesome of all fruits. It is found in most parts of the world, and has been known in England for at least four centuries. In 1483, "Strabery rype" (according to the old spelling), was as common a cry as it is now.

The *cherry* is understood to have been brought to Rome from Armenia, by Lucullus, the conqueror of Mithridates, of whom you may remember to have read in your Roman history. This was about 68 B.C., and the fruit soon became so popular, that Pliny says, "In less than an hundred and twenty years after, other lands had cherries, even as far as Britain beyond the sea." In Barbary it is called "The berry of the king."

The *blackberry*, which is the best and the most abundant of our native berries, is the fruit of the bramble, and can be made into a remarkably good and wholesome medicinal preserve—particularly useful for children.

The *apple-tree* mentioned in Scripture for its superiority "among the trees of the wood," is said to be a native of the East, although it thrives so well in cold climates. The beautiful art of grafting,

whereby all manner of fine species can be produced from a common stem, has brought apples to a high state of perfection. There are several counties in England known as the "cider counties," which in spring are one flush of pinky white blossoms, and in autumn crimson and gold with ripe apples ; it is there that cider, the pleasant drink made from apples, is principally manufactured. Apples are also made into many good and cheap dishes in parts of the country where orchards are plentiful ; but their value as an independent article of food is not yet sufficiently understood in this country, though abroad, they are much more frequently used, along with bread, for the food of labouring men. Liebig, a great chemist, writes that, "when freely used at the season of ripeness by rural labourers and others, they prevent debility, strengthen digestion, correct the putrefactive tendency of nitrogenous food, avert scurvy, and probably maintain and strengthen the powers of productive labour."

The wild or crab apple is a beautiful little fruit, but insupportably bitter to the taste. The fabled "apples of Sodom," said to grow on the shores of the Dead Sea, and while gifted with a beautiful exterior, to turn to dust and ashes when cut open,—are in reality the fruit of a species of egg-plant which grows in that region. When a small insect punctures the skin of the fruit, the whole inside turns to corruption, and while the outside continues beautiful, it is filled with a substance resembling ashes.

The *pear* is even more palatable than the apple, but not so useful, or so easily cultivated a fruit. A pleasant drink called perry is made from it in one county of England alone,—Worcestershire. The *plum* is a favourite but unwholesome fruit ; there are many varieties, and it grows wild in the hedges in some parts of Britain. Plum preserves are particularly valued—especially those made of damsons and magnum bonums.

There is a beautiful sight which I have seen as commonly in the south of France and north of Italy, near the borders of the blue Mediterranean, as I have seen orchards of apples in this country,—a grove of small trees with rounded tops, and smooth glossy dark-green leaves, and fragrant silvery white blossoms, mingled at the same time with bright round golden balls—the foliage, the flowers, and the fruit of the *orange* tree ! Such quantities of this delicious fruit come to our country, from Malta and other places, and they are sold so cheap, that they are

almost as available even in cottages, as are our own home-bred fruits.

There are many beautiful and innocent-looking forms of vegetable life to be met with in our gardens and hedges, which are yet full of deadly poison, while others, from their close resemblance to nutritious articles of food, are often partaken of by mistake, and fatal accidents are consequently of too frequent occurrence. Warnings and information upon this subject, ought to form part of the instruction of every schoolmistress, in order that children may learn to avoid them. Nursery-maids, cooks, and even mothers, are often found quite ignorant of these common things. An awful tragedy which took place some years ago in the north of Scotland, is still fresh in every one's recollection, when several guests at a dinner-party were poisoned and died in a few hours, in consequence of the carelessness and ignorance of the cook, who used the root of monk's-hood instead of horse-radish. Monk's-hood or aconite is a tall plant with dark green leaves, and a curious hood-shaped blue flower, which ought never to be allowed an entrance into a garden. So many deaths occurred from the use of aconite as a medicine that it has fallen into disrepute, one drop of the tincture causing death, but it is still extensively used in homœopathic practice ; the minutest doses of it have, it is said, an instantaneous effect in lowering the pulse and reducing fever : it is the young leaves and old roots which have so close a resemblance to horse-radish. A species of hemlock, called fool's-parsley, is exceedingly poisonous, and when this weed springs up among plain-leaved parsley, it requires close observation to distinguish the difference. Two sailors landed from their boats at Campbeltown a year or two ago, gathered some of this plant, cooked it as parsley, and died. A poor starving man in Edinburgh did the same, and the medical men said that he died exhibiting all the symptoms which history informs us preceded the death of Socrates ; for the fatal cup which was given to him by his unjust judges and ungrateful country, because he was too enlightened for his age, was composed of hemlock. Buttercups are poisonous : they are so caustic that children's hands are sometimes inflamed by them. They are called buttercups because it was believed that cows were very fond of them when fresh, and that they gave a deep colour to the butter, but this is not true. The poison disappears in drying, and they are harmless when mixed up with hay, and even

nutritious, as their stems contain a great deal of mucilage. Laburnum seeds are highly poisonous,—three little girls in Hertfordshire gathered and ate some of these seeds : two died that night, the third only recovered after a lingering illness. Half a berry of the dark purple fruit of the deadly night-shade has proved fatal. Belladonna is also highly poisonous : strangely enough these two plants belong to the same species as the potato, and it is in the fruit answering to the potato-apple that the poison lies. The roots of henbane have several times been used in soup for parsnips : their poison produces delirium and stupor. This mistake once occurred in a monastery at supper : one monk got up at midnight and rang the morning bell ; some obeyed the summons, but could not read, while others repeated words that were not in their books. Fox-glove, though, like many other poisons, a valuable medicine in the doctor's hands, is fearfully dangerous when ignorantly used, and had better not be meddled with. Even the odour of daffodils and lilies is apt to cause headaches, and infants have been made very ill by swallowing little bits of the flowers, and also those of the jonquil and snow-drop.¹ The leaves of the common laurel are highly poisonous, and produce death in a short space of time : the taste and smell are very similar to bitter almonds, and in fact it is the same principle in each, that of prussic acid. Cooks are very apt to save themselves time and trouble by rushing out to the shrubbery for these leaves as a seasoning for puddings and creams : serious consequences have been known to occur ; for though a small quantity is harmless to some constitutions, others are powerfully affected. The beautiful waxy berries of the yew, with their sweetish taste, are very attractive to children, and many fatal accidents have thus occurred. The wild arum, that strange-looking plant with its dark coarse leaves, and its long large greenish flower, contains a very irritating poison, which resides principally in the leaves. Many accidents occur from mistakes as to the right kind of mushrooms to be gathered for use : their use is not so common here as in Italy and Australia, where they are used as solid food—(truffles are considered as one of the greatest continental delicacies) : still, even in this country they are sufficiently prized for sauces and accompaniments to dressed dishes to make it of consequence that the safe kinds should be distinguished

¹ Mr. Johnston's *Botanical Lectures at Guy's Hospital*, quoted in Dickens' *Household Words*.

from those that are poisonous ; the bright-coloured ones are generally suspicious. “ The mushrooms proper to be used in cookery grow in the open pasture land, for those that grow near or under trees are poisonous. The eatable mushrooms first appear very small, and of a round form on a little stalk. They grow very rapidly, and the upper part and stalk are white. As they increase in size, the under part gradually opens, and shows a fringed fur of a very fine salmon colour, which continues more or less till the mushroom has gained some size, and then turns to a dark brown. These marks should be attended to, and likewise whether the skin can be easily parted from the edge and middle, and whether they have a pleasant smell. Those which are poisonous have a yellow skin, and the under part has not the clear flesh-colour of the real mushroom ; besides which they smell rank and disagreeable, and the fur is white or yellow.”¹ It is a useful lesson to impress upon all children and young people, never to eat of any unknown plant or fruit unless they receive express permission to do so from those who are competent judges.

¹ A French physician maintains that *all* mushrooms may be used as food, provided those that are reckoned poisonous are cut in pieces and washed in *nitric acid* and *water*, or when this cannot be had, in *strong brine*. When thus prepared, he allowed his family to eat all varieties of mushrooms.

CHAPTER IV.

WHAT DO WE DRINK ?

THIS is a not less important question than the last ; in some respects the answer is even more so. The man who has pleasant and wholesome beverages provided for him at his own fireside, will be robbed of the excuse, and probably of the inclination, to go elsewhere in search of them. On the other hand, the man who cannot get a drink of wholesome water, or a cup of sweet milk at home ; whose tea is coarse and bitter, whose coffee is ill-made, who has never tasted cocoa, for his wife thinks it “ new-fangled ” and a “ trouble,” and who can only procure a draught of beer by going for it to the public-house, where there is a good fire, and a fiddle and a song, or at best to the grocer’s, where he has a “ dram ” given to him over the counter into the bargain,—has some reason for thinking himself driven to bad ways and good whisky. Ah, that awful whisky ! that cheap poison ! that liquid fire which after a time the stomach refuses to receive, and sends straight up to the brain, where it is found after death undiluted ; that annual murderer of one thousand souls and bodies in our island.¹ It will therefore be well worth your while to know and to teach the importance of pleasant and wholesome beverages, and I shall notice the following :—I. Water ; II. Milk ; III. Tea ; IV. Coffee ; V. Cocoa and Chocolate ; VI. Beer.

I. Water.—It is evident that bodies consisting three-fourths of water like the human body, upon which there is a constant drain going on, must require as constant a supply of the precious element, without which we should be a collection of mummy-like

¹ “ It has been fully ascertained that not less than one thousand persons die from the direct influence of ardent spirits in the British Isles every year.”—See “ *Influence of Wholesome Drink*.”

atoms. Water is required to purify and thin the blood, which would else roll sluggishly along in its swollen channels ; it is required to mix with and dilute the food in its process of digestion, and thus render its path smoother and easier ; it is required to visit and refresh the heart and the brain ; it is required to quench thirst, or in other words to disperse the thickening blood in the vessels of the throat, which is the cause of that sensation, pleasant when it can easily be dispelled, but one of the most awful sufferings which human nature is capable of, when endured for a long time. In cases of excessive thirst, lukewarm water is better than cold, for the latter causes a reaction, and thus increases the flow of blood to the part,—the continuous cold of ice, however, is not liable to the same objection. Water is composed of oxygen and hydrogen, the very elements which are contained in large proportions in the solid parts of animals and plants, and which water is therefore at hand to help in supplying, so that it is not only drink but food to plant and animal. It is of great importance to have access to good water, and as it is by no means so common a luxury as may be imagined, it should be one of the points carefully considered in the “choice of a residence.” Soft water is the purest, and contains less lime than hard water, which is however lighter and pleasanter to drink, though not so good for domestic purposes. Organic impurities render water very unwholesome, and are frequently found in it owing to mud and decayed leaves, or the decomposing bones of insects and animals. Water of this kind will speedily become the abode of living plants and living animals. If the water has an acid tendency, it will produce little fungi and other plants, which the microscope will reveal ; if on the contrary it is slightly alkaline, numbers of tiny living creatures of the strangest forms will spring into existence. When there is the least doubt of the wholesomeness of water, a filter should always be employed, for it may be thoroughly cleansed by being strained through sand, gravel, or charcoal, the last of which is by far the most effectual, as it absorbs and destroys all offensive gases. Even the worst ditch-water may thus be rendered sweet and clear. Animal charcoal made from burnt bones, is more powerful than wood charcoal. A filter is an easy thing to construct out of any tall receptacle, such as a cask, box, jar, or flower-pot, in which layers of the filtering substance can be placed so that the water can pass through it, and escape in its cleansed condition.

II. **Milk.**—The natural food of the young of a large class of animal life, partakes of the nature of both animal and vegetable food, and has therefore been called “model food.” It contains the principle of casein, which answers to the fibrine and fat of beef ; and at the same time partakes largely of sugar, which answers the same purpose as the starch contained in vegetables. It also combines solid and liquid nutriment,—it is only in the latter capacity that it can be introduced into this chapter. Milk forms an excellent drink for all, and when combined with the working-man’s porridge, or the child’s soaked bread, it is more nourishing and fattening than any other kind of liquid that can be used for breakfast and supper. A milk diet is considered of the greatest importance for consumptive patients, and cream, the rich thick part which rises to the top, is now frequently ordered to invalids as a nourishing and most agreeable medicine.

III. **Tea.**—I cannot do better than extract for you the following simple and interesting account of the plant from which we receive the beverage so common throughout our land :—“ Upon the hill-sides in the remote land of China, there are thousands of acres of gardens filled with rows of plants that look from a distance something like large gooseberry bushes, but which, upon closer inspection, more nearly resemble stunted japonica shrubs. Almost as soon as these shrubs have fully put forth their young leaves, men and women come round, and strip their twigs and branches bare. They then carry away the leaves, and dry them with much care, partly by exposure to the sunshine and air, and partly by the heat of fires of charcoal, until two-thirds of their weight have been steamed away. When the leaves are dried quickly, the shrivelled and crisped foliage is of a green colour. When they are left moist for a longer period, and are dried more slowly, they turn of a dull black hue. In either case, the crisped and curled leaves form the tea, portions of which are sent over the sea for the use of English tea-tables. The ground which is devoted to the growth of the tea-plant in China, would, if all joined together, form a farm nearly as large as Wales ! It will be quite worth any interested person’s while, to satisfy himself by a very easy experiment, that there is something in tea, which careless notice and common use would never discover. Let him simply rub a teaspoonful of dry tea-leaves to powder, and place it

in a flat watch-glass, standing on the hot hob of a fireplace, a piece of stiff white paper being twisted up in the form of a sugar-loaf, and placed over the watch-glass and powdered tea. So soon as the tea has become very hot, a white steam-like vapour will rise from it, and be entangled in the paper, and if the paper cap be removed after a few minutes, and be unfolded, its surface will be found to be sprinkled with a white glittering powder, something like pounded glass, or very fine salt. The powder is the vapour turned into the powdery state after it has been entangled by the paper. There is so much of this white powder in tea, that three grains can be procured from half an ounce of the leaves. Fifty pounds of good tea would furnish a pound of the white powder. Having found out the existence of this white powder, hidden away in the black or green leaves of tea, the next thing we have to do is to discover, if possible, what its nature and character are. The chemists have given it a learned name,—*that* will not help us much in our present proceedings ; still it may be convenient to know the curious substance by the title it bears among learned men. The chemical name of the white powder is THEINE. This means nothing more than the *white powder contained in TEA*. There is another really helpful consideration, however, which naturally occurs while we look at this substance. Where did the white powder come from ? How did it get into the tea-leaf ? The white powder of tea was formed in the leaf when that leaf was stretched out in the Chinese sunshine, as the plant grew on the side of the warm Chinese hills. It was made out of the food which the plant sucked in from its native soil, and its native winds, in the little chambers of its living structure, at a great expense of wise effort and skill. No human artist can make a grain of that white powder, if he spends a lifetime in the trial. In the little tea-leaf, as it grows on its sunshiny hill-sides, the most subtle and cunning powers are set to work by THE WISDOM which knows everything, and by THE HAND which holds and directs all things in man's wonderful world. The result is, that out of coarse earth, and thin vapours, and fostering sunshine, the ingredients of the white powder are gathered together, and mixed, each in its proper proportions, and in the right manner, in the hidden recesses of the growing plant. God, in His own sublime language, says to the Chinese soil, and atmosphere, and sunshine, ‘*Let the white powder of the tea-plant be*’—and there it is. In

a world that is so overflowing with perfect contrivance as this one, which serves as man's dwelling-place, it is not at all likely that this curious white powder is made by the tea-plant in such abundance—25,000 tons of it at least turned out on the Chinese hills every year, and scattered thence to the four corners of the world—without having some very good work appointed it to do. You will not wonder, therefore, that inquiring men, who know that all these thousands of tons get mixed in the ordinary course of ordered events, with the flesh and blood of human bodies, should be very curious to find out what they are capable of doing there. Another very surprising fact also tends greatly to strengthen this curiosity. The coffee-tree grows not in China, but in Ceylon, in Arabia, and in the West Indies. The cocoa-tree flourishes on the other side of the American continent, in Mexico, and Peru. Yet the coffee and cocoa plants make out of the East and West Indian, the Arabian, and the South American soils, vapours, and sunshine, *exactly the same kind of white powder* that the tea-plant manufactures on the Chinese hills ! Plants so unlike in external appearance, and living in districts so remote from each other, first get to be used in similar ways in the preparation of beverages for millions of the human race. Then curious and prying inquirers find that there is one principle present in all these beverage-yielding plants. The common-sense inference is plain. It is most likely that it is *this one substance present in all the three different plants*, which has led to their being employed so generally in the preparation of drink.”¹

It was long believed that tea was not a nourishing beverage ; but now that the true nature of it is known, it is acknowledged that the white powder or theine described above, produces remarkable and useful results in arresting the waste of the body, feeding the nerves, supplying the place of food, besides soothing and enlivening the mind by giving the cup “which cheers, but not inebriates.” There is also a large quantity of the nourishing flesh-making substance of gluten in tea-leaves, though very little is extracted by the common process of tea-making. It is recommended that a pinch of soda should be added to the water, along with the tea, which would dissolve a portion of the gluten, and thus make it more nutritious.

¹ See Tract on the “Influence of Wholesome Drink.” Fourth Edition. Twentieth Thousand.

On the South American coast the tea-leaves which remain after a tea-making, are handed round upon a silver salver, and partaken of by the guests—eaten in this way they would be as nutritious as beans or peas. In 1664, tea was so far from being the common beverage, that the English East India Company considered two pounds of tea, which they presented to the Queen of England, a rare and worthy gift ; it is said, that when the royal cook was desired to make use of it, he boiled it well, and sent it up to the dinner-table as if it were spinach. According to the above estimate of the nourishment contained in the leaves, this was not so absurd as it has been thought.

Like most good things, tea in excess is very unwholesome. Tea-tasters—those who are employed in deciding on the different merits of many chests of tea, are liable to headaches and giddiness, and in a few years, to attacks of paralysis—and in China new tea is never used, because it then possesses a peculiarly intoxicating quality. It frequently causes want of sleep, to which property the legend of its first introduction bears reference.

It is said that a hermit, who suffered uncommonly from drowsiness during his vigils and prayers, was at last so angry at himself, and especially at his perpetually closing eyelids, that he cut them off, and threw them on the ground. The eyelids, however, took root, and sprung up again in the shape of a shrub, the leaves of which were shaped like an eyelid, bordered with lashes, and which possessed the power of keeping people awake—it was the tea-plant ! So much for legends. Now let us turn to the more practical subject of tea-making—not quite so easy a process as it sounds—to judge from the very ill-made tea often met with. In the first place, the water must be boiling, but freshly so ; if it has been simmering over the fire for hours, the water will have lost its spirit, and become vapid. The teapot ought to be thoroughly dry and elcansed ; and immediately before being used, it ought to be rinsed out with hot water. M. Soyer recommends putting in the tea, and letting it remain by the side of the fire for a time before the boiling water is poured over it, as, he says, this brings out the flavour better afterwards. Care must be taken not to let the infusion stand too long, as then a bitter sloc-like taste is produced, owing to an astringent substance contained in the leaves, known as tannin or tannic acid. Ten minutes or a quarter of an hour is considered long enough for the tea to stand,

and a good teaspoonful for each person, and a comfortably large one for the teapot, is generally considered to be a sufficient quantity of the fragrant herb.

IV. **Coffee.**—The “white powder” of coffee receives a different name, though exactly the same in substance and effects as that of tea,—it is called *Caffeine*. There is, however, less of it in coffee than in tea, which allows a greater and stronger quantity of the beverage to be taken ; a cup of strong coffee, it is said, generally holds as much of the essence of white powder as a weak cup of tea. More of the other nourishing ingredients which it contains can thus be taken, which renders it a more profitable beverage for working men, who find it a warming, nourishing breakfast, easily prepared before going out to their work. It is likewise much more economical than tea, which cannot be bought for much less than 4s. a pound, while coffee costs from 1s. to 1s. 4d. Here is a very cheap way of preparing coffee. “Put one ounce of ground coffee in a pan, pipkin, or jug, either on or close to the fire, keep stirring until quite hot, but take care it does not burn ; then pour quickly over it a quart of boiling water, cover it over, and keep it near the fire for a few minutes, but without letting it simmer ; then fill the cups gently without shaking it. The grounds keep and boil for your coffee next day, or for your next meal.”¹

I ought to have told you before that coffee is the bean of a tree, which is said to be a native of Southern Abyssinia, from whence it has spread to South America, the West Indies, and Arabia ; the coffee from the latter country is esteemed the finest : the beans are thoroughly dried in the sun, and deprived of their husks before they are exported to other countries.

Before domestic use they are roasted, and then ground to a powder, which loses much of its flavour by keeping, and ought therefore to be bought in small quantities, or, what is much better, be ground at home when needed ;—a small coffee-mill is easily procured, and grinding it is an easy and amusing occupation for children.

Professor Johnston, in his interesting book on *The Chemistry*

¹ From one of M. Soyer's receipts.

“Among some of the Eastern nations, the custom prevails of drinking the *grounds* along with the infusion of the coffee ; in these cases the full benefit is obtained from all the positively nutritive matter which the roasted coffee contains.”—*Professor Johnston*.

of *Common Life*, has mentioned, that in the island of Sumatra, a common beverage of the whole population consists of what is called coffee-tea, or coffee-leaves prepared like tea, which contain theine, and when immersed in boiling water, and drunk with sugar and cream, forms a nourishing and refreshing drink. Were this discovery to come into general use, it would be an important addition to the catalogue of economical beverages, for coffee-trees cultivated for the leaf could be reared in many more parts of the tropics than they can be for the berry, the ripening of which requires peculiar soils and climates. The price of the leaves in Sumatra is about $1\frac{1}{2}$ d. per pound.

V. Cocoa and Chocolate.—Cocoa has nothing to do with the cocoa-nut. The *Theobroma Cacao*, the cocoa or chocolate-tree, is a native of Central America, and there are whole forests of it in Demerara. Linnæus, the great botanist, named it “theobroma,” which signifies “food of the gods,” because he was so fond of it; while, to show how “doctors differ,” Benzoni, who travelled in the sixteenth century, declared that chocolate was a drink “fitter for a pig than for a man;”—very few people would agree with the latter opinion, I think. It is an evergreen tree, bearing fruit and flowers the whole year round, June and December being the usual times for gathering the fruit, which resembles a small cucumber. It contains from six to thirty beans or seeds enclosed in a sweetish pulp, which is eaten by the natives where the tree grows. These seeds, which have husks, are dried and roasted like coffee.

Professor Johnston gives these three modes of preparation; but there are so many preparations of chocolate, and they are so frequently mixed with other substances, that it is not easy to distinguish them. He says that: 1st, The bean and husk after roasting are beaten or ground into a paste, which is mixed with starch, and sugar, and other substances, and sold as Cocoa; 2nd, The bean is deprived of its husk, and then crushed into small bits, which are called cocoa nibs, and which form the purest kind of cocoa; 3rd, The huskless bean is ground into paste, which is seasoned in various ways, and called Chocolate.

The husk of the bean is also sold separately, and when boiled in water, forms a sort of cocoa-tea. A great deal of this latter substance is imported into this country from the chocolate mills of

Spain and Italy, and is extensively used among the poorer classes in Ireland, as it is sold very cheap. The "white powder" of cocoa is called *theobromine*, and is found even in the husk. In addition to this, however, cocoa possesses a nutritious element, which is not found in tea or coffee—a large proportion of fat or oil, which is called "cocoa butter," and which causes it to be a most nourishing food, too rich, indeed, for very delicate stomachs. The best cocoa is sold at about 1s. 4d. a pound, and much less of it may be used than is ordered in the printed directions. The best way to make cocoa is to mix the powder in cold milk, which is then boiled with sugar. When this is too rich, it may be made in the same way with water, and sugar and milk added as with tea. Cocoa nibs ought to be simmered in water for three hours. The seeds of the cocoa-tree were not only used in Mexico for the purpose described above, but at the time of its ancient monarchy, they were used as money, six beans being the value of a halfpenny.

VI. **Beer.**—It is a very rare thing to find a labouring man who is altogether content with any of the beverages mentioned above ; he likes to have something stronger with his dinner, and unquestionably the safest and most nourishing of the stronger drinks is beer. When taken in moderation, it has both the elements for making flesh to sustain, and for making fuel to warm the body. The beer-shop, however, is productive of almost as much misery in England as the whisky-shop in Scotland—for beer, when taken in large quantities, loses its valuable properties, and causes a stupified muddling intoxication. If her husband will have beer, the prudent housewife must see that it is much better, in every point of view, to brew at home ; it is a saving of expense ; it is far more wholesome, as bought beer is largely adulterated ; it prevents the husband from seeking the society of drunkards ; and it is far safer when taken at regular hours, with regular food, than when drunk, fasting, at all sorts of times and places. Here is an easy and cheap mode of brewing.

"The materials required for brewing on the smallest scale adapted for a labourer's family, are a pot or boiler that will hold four gallons, and two or three tubs,—say a washing-tub and a bucket or two ; if a small cask cannot be obtained to preserve the beer, two or three large jars or stone bottles will answer the purpose.

"To brew the least quantity desirable, rather more than three

gallons of soft water should be boiled, and allowed to stand until the reflection of the face can be seen in it ; a peck of ground malt should then be put into a tub or bucket, with a small hole bored on the side, level with the bottom, and covered inside with a few twigs, and a piece of coarse canvas over ; the outside being closed by a wooden peg or cork ; the hot water is then to be poured on, and the whole mixed by stirring for a few minutes. It should afterwards be covered over with a cloth, and set by the fire to keep warm for three hours ; the peg or cork must then be removed, and the whole allowed to drain into a tub or bucket ; after this, as much water should be poured on the wet grains as before, only a little hotter, and be also covered over and kept warm for two hours ; this finishes what is called the mashing. As soon as the boiler is emptied the second time, the quantity of sweet wort first made should be returned to it, and boiled a quarter of an hour ; two ounces of hops are then to be added, and the boiling continued for half an hour longer ; the whole should then be strained through a fine sieve, to keep back the hops, and cooled as quickly as possible in shallow vessels. The second quantity should then be boiled in the same manner, and with the the same hops, and similarly cooled ; both worts should be mixed together, and a tea-cupful of yeast added ; it should then ferment in the washing-tub for two or three days, being frequently skimmed to remove the fresh yeast that is formed. When the fermentation has nearly ceased, all the yeast must be skimmed off, and the beer put into the cask, which should be filled quite full ; it will then ferment slightly for two or three days longer, and the bung-hole should be slightly tilted on one side, so as to allow the yeast to escape. When the working has entirely finished, the cask should be filled up with some of the beer retained for the purpose, tightly corked down, and it will be clear and fit to tap in a week. A good cask is much better than jars or stone bottles, and this beer is superior if brewed in large quantity, but good wholesome beer can be made as directed, with the ordinary domestic utensils without injuring them, as a sound cork readily closes the hole in the washing-tub.

“This quantity of malt and hops will produce upwards of five gallons of beer at a cost of about two shillings, as the value of the grains and yeast will more than cover the expenses of fuel.”¹

¹ See Tegetmeier's *Manual of Domestic Economy*.

CHAPTER V.

HOW ARE WE CLOTHED ?

FROM the time of the simple clothing of skins made by God's own hand, to the days when Solomon shone in all the glory of his royal apparel, and again to the present days when "broided hair" and "costly array,"¹ although among things forbidden, are to be seen in every class of society, what an immense range and variety do we find of materials for clothing and adorning these perishing lumps of clay ! The principal of these materials are taken, two from the vegetable, and two from the animal kingdoms. The raiment of the lilies of the field, which neither toil nor spin, was pronounced to be more beautiful than the garb of Solomon ; and it is from a plant bearing almost as fair a flower, that we obtain linen—that pleasant and beautiful substance mentioned so often in the Bible, both with regard to the clothing that has been, and as an emblem of that which is to come, for "the white robes" of heaven are said to be of "fine linen, clean and white."

An Italian infidel, not very long ago, scoffed at the scriptural allusion to the "fine linen of Egypt," for he said that flax had been unknown in Egypt, and that all the material found in the ancient tombs of that country was cotton. Some gentlemen accustomed to the use of the microscope examined the fibres of cotton and linen with it, and found that there was a decided difference between them. Cotton is quite flat, and the sharp edges turn up, which is the reason that it is bad for dressing wounds, as these hard folds are irritating ; linen, on the other hand, is composed of round smooth tubes. The stuff found in the pyramids and other tombs was subjected to this test, and it was found

¹ 1 Tim. ii. 9.

that in every case it was made of linen, and in many cases of peculiarly "fine linen." Muslins from Dacca, in India—the finest in the world—contain a hundred and twenty threads in the eighth part of an inch, but the Egyptian linen of a thousand years ago contains a hundred and thirty.

There is a tall slender plant, with fine stem and lovely blue flowers, which you see not only in many a cottage garden, but covering large fields in many countries—Russia, France, Ireland—and also to a smaller extent, in some parts of Scotland and England. The stems are cut down and steeped in tanks of water, for two or three weeks, till the fibres of the plant are separated from the rest; these are taken out, and spread in the fields to dry, then it undergoes the various processes of rolling, scutching, and heckling, and the refuse makes the coarse article called tow. In places where flax is largely cultivated, however, the preparatory processes of steeping and drying are carried on in a new and much more complete way. There are tanks connected with the works, and the flax is dried in kilns. Finally, it is spun and woven into the smooth white shining fabric called Linen. The seeds which follow the beautiful little flax-flower are also of great use; lint seeds are excellent for poultices, and when crushed they produce linseed oil, while the refuse makes fattening cakes for cattle.

In the southern States of America, and in the East and West Indies, there are vast plantations of a tree, generally kept down to about four feet in height; it bears a long woody pod, something like the walnut in its rough grain, which within is filled with a beautiful white soft lining called Cotton, which God placed there to be the clothing of many of his creatures, and to give food by giving work to many more. You might see the poor negro gathering these pods, taking out the cotton, spreading it in the sun to dry, till the black seeds which are imbedded within are quite hard, which is a sign that it is ready to be put into the cotton gin or machine for separating the seeds from the cotton, which is such hard work, that the same person ought not to be kept at it for more than a fortnight. When you wear your pretty cotton gown, do you ever think of all the labour it has cost, and are you grateful enough for the cheap price you paid for it? Afterwards, women take the cotton in hand, who purify it from all the bad and yellow flakes, and leaves, and seeds, left amongst

it, and then it is ready to be packed up in bales, and sent to Europe. Next we see it in that vast palace of industry—with its tall red chimney and gigantic wheels, and rushing water or wonder-working steam—called a cotton-mill ; then it is carded and combed, and “ roved ” and spun, into the cotton thread, which you know so well by sight.

Cotton and linen have a noble use long after they have been spun and woven, and made into clothing, and worn and been put aside. Paper, that blessing of the modern world, is made of cotton and linen rags, coarser paper being made of the former, and fine paper of the latter.

The beautiful fabric of silk, now so extensively used for dresses in every rank, was once so rare, that in Rome it was sold for its weight in gold, and could only be purchased by a very few of the ladies of the highest rank ; it is the work of a tiny worm, a native of China, where it has been reared from a very early period. This article of luxury was, strangely enough, introduced into Europe, A.D. 555, by two poor monks, who brought a number of the worms from India. A moth with white wings lays a small egg—the size of a pin’s head ; in about six months a little caterpillar with eight pair of feet walks out of the egg, and feeds upon the leaves of the mulberry-tree, or upon lettuce. Mr. Fortune, in his interesting account of a *Residence in China*, mentions having seen a large temple converted into a temporary place for feeding silkworms ; huge idols, from twenty to thirty feet in height, looked down upon the strange scene ;—the floor was covered with such numbers of worms, that there was a distinct noise heard all around of the millions of tiny mouths crushing the fresh mulberry leaves. They do not at all like to be disturbed at their dinner, and, generally, no one is allowed to go near them, while the room is kept partially darkened. The worm soon becomes larger, and casts its skin five times ; it then winds for itself a little cocoon, which is to be its temporary tomb, about the size and shape of a pigeon’s egg, made of soft glossy, yellowish threads ; within this it throws off the last worm-skin, and becomes a chrysalis, and twenty days afterwards it is again a winged moth. The silk threads, when unwound, are found to be so fine, that they would break and be useless, so the ends of several cocoons are put together in warm water, which softens the natural gum that is in them, and they fasten into one strong thread. A single

thread of silk is 400 yards long ; one pound of silk would extend over 535 miles, and forty-seven pounds would encircle the globe.

The materials which I have already noticed would scarcely have been sufficient for our clothing and protection in the many wintry days of our northern climates. Human bodies require not to be *made* warm by clothing, but to be *kept* warm, that is, their natural heat, created and maintained in the ways I have already described, must not be allowed to escape into the cold external air. Cotton and linen are conductors of heat, especially the latter, that is, they carry off the heat from the body, and are therefore cool and pleasant for wearing in summer. But there is something else needed to complete our comfort, something that we learn the use of from the beasts of the field, and, indeed, despoil them of. In the lands of ice and snow, the polar bear wears a comfortable yellowish coat all the year round, but when winter comes he dons a thicker white fur. There, too, the reindeer's fur becomes denser when the long sunless winter of gloom and ice draws near. A recent arctic traveller writes thus :—"The reindeer skin, when dressed with the hair on it, is so impervious to the cold, that if clothed in a suit of this material, and wrapped in a mantle of the same, a person may bivouac all night in the snow with safety during the intensity of the arctic winter." That is, because the fur or wool of animals, unlike cotton and linen, is a *non-conductor* of heat ; it does not carry it away, but retains it close to the body, which is thus preserved from chills.

It would not be easy to obtain skins of reindeer and polar bears to clothe us all, neither would they be very becoming winter dresses, so we shear the wool off the sheep of our pastures, and manufacture it into various kinds of warm woollen clothing. Flannel, one peculiarly useful form of it, is well proved to be a non-conductor of heat, by the common practice of keeping ice in hot weather simply wrapped in flannel. In this cold variable climate it is an excellent plan for every one to be clothed in flannel from head to foot, at all events during the severities of winter and spring—children and grown-up persons, the strong as well as the delicate—the rich man in his carriage, and the poor man in his field, will alike feel the advantage of it ; while its use in circumstances of malaria and infection has been already mentioned in another chapter. It is not only proper for the protection of the frame from cold, but by the gentle friction which it produces all

over the body, it is very good for the skin, and assists in keeping its pores in a healthy condition.

There is a great deal of a practical nature connected with the "clothes we wear," which must now come under our consideration. Webs of cotton and linen and woollen would be of very little use if we had no fingers to shape and fit them properly to the cold bodies that are to be warmed and made comfortable. While to man were given large clumsy hands, that look inexpressibly odd and awkward when darning a stocking, or sewing on a button, on woman were bestowed small slender fingers, in which the delicate needle seems quite in its proper element. Illustrious examples of usefulness in high places are not wanting. When Queen Elizabeth was a little girl of six or seven years old, she worked a cap for her brother, King Edward VI. There was a Roman matron of rank, who had for her epitaph these words in Latin: "She stayed at home and spun wool;" while in the beautiful picture drawn for us by the mother of a king,¹ which we read at the beginning of this book, we find the woman whose price was above rubies, seeking wool and flax, and working willingly with her hands, making fine linen, and clothing her household with double garments.

Needlework, successfully and diligently pursued, will do much to make a home happy; for where is the man who can retain his temper and his peace of mind when he finds a string off his collar, or a button off his shirt? Women little think how they alienate the affections of a husband by inattention to his comfort in these small things, and no wonder, for when real love is in the heart, real thoughtfulness ought to be in the head.

Shirtmaking is a very important part of needlework. A "piece of linen" generally consists of twenty-six yards, and as yard-wide is preferred for shirts, this quantity would make eight shirts. There are nineteen necessary parts in a shirt, the body, two sleeves, two wristbands, two binders, two shoulder-straps, one collar and band, two sleeve-gussets, two neck-gussets, two side-gussets, two wrist-gussets, and one bosom-gusset. Cut as follows:—

1. The bodies should be first cut, for which purpose, take off seventeen yards, and divide it into eight equal parts,—each will be two yards and half-quarter long.

2. Next cut off five yards and half-quarter for eight pairs of sleeves, divide

¹ See Proverbs xxxi. 10-31.

this into eight equal parts. Each breadth will make a pair of sleeves twenty inches long, and half-yard wide.

3. Take off seven-eighths for six collars; cut this along the selvage into three equal parts,—each will be twelve inches wide, and must be cut across at the middle, so that the length will be about fifteen inches and three quarters.

4. Cut off half a yard for six pairs of wristbands; there will be six in the width of the cloth, each six inches wide, and two in the length, nine inches long.

5. Next cut off twelve inches for six pair of sleeve-gussets; the width of the cloth will give six, each six inches wide, and the length will give two, six inches long.

6. Then cut off six pair of sleeve-binders; they should be about twenty-five inches long, therefore cut off half a yard and three nails. The width of the cloth will allow of twelve strips, each three inches wide.

7. The shoulder-straps for six shirts may be next cut; for this purpose take off ten inches and a half. The twelve strips can be cut from the width of the cloth; each will be three inches wide.

8. The neck and side-gussets may be of the same dimensions. Accordingly, cut off nine inches; divide this along the selvage into eight strips; each will be four and a half inches wide, and when cut across the middle, four and a half inches long. These squares cut angularly will answer both purposes for the eight shirts.

9. Two collars, two pair of wristbands, two pair of sleeve-binders, two pair of shoulder straps, and two pair of sleeve-gussets, are still wanted to complete the eight shirts, and one yard of the cloth remains. Cut this in the following manner:—

10. Take a strip twelve inches wide off the full length, along the selvage; when cut across this will make two collars.

11. Next cut off another strip in the same direction, six inches wide; this, when cut across into *four* parts, will make two pair of wristbands.

12. Then cut off four other strips, each three inches wide, and cut these across, so that one part of each will be twenty-five and a half inches long, and the other ten and a half. The four longer strips will make two pair of sleeve-binders, and the four shorter ones two pair of shoulder-straps.

13. The strip yet undisposed of will be six inches wide, and thirty-six long; fold this angularly, so as when opened to produce a square; and cut four of these for the two pair of sleeve-gussets. The small remnant, twelve inches by six, may be cut into breasts and wrist-gussets.

Night-shirts are, in every respect, made like plain day-shirts, but the bodies should be longer, and the collars and wristbands wider. Strong calico is preferred to linen for this purpose by some persons, being more absorbent. Some persons like the sleeves and wristbands joined quite round, only allowing room for the hands to pass through. Somewhat less than twenty-one yards of yard-wide linen or calico will make six men's night-shirts of very full size."¹

This is only the simplest pattern. Shirts are now made in various ways. It is becoming very common to make them opening behind, which keeps the fronts much more tidy and un-

¹ See *Simple Directions in Needlework and Cutting out*, intended for the use of the National Female Schools of Ireland.

rumpled, and saves a great deal of trouble with the button-holes. Instead of fastening on collars, many have the neck set into narrow bands, and the collars made separately, while the breasts are made full by letting in cambric, or very fine linen with fancy work.

In cutting out, we must be very careful always, when possible, to draw out a thread after the proportions have been marked out, so as to insure keeping to them properly.

Great economy ought also to be practised, for the spare little bits will be of great use for patching and mending, or to be joined together to form some other article, or may even be sold for making paper. Out of white and coloured remnants neatly sewed together, may be made very nice patch-work petticoats, which give excellent employment to little fingers learning to sew, and may afterwards be given to poor children.

It is well to remember, in cutting out any article of dress, that a "tight fit" is a most extravagant measure, though it may look pretty at first. The material is strained and injured, and soon gives way or looks shabby at the seams, and there is no room left for alterations—not to speak of the more serious consideration of the injury produced by tight dresses as well as tight lacing, which compress the lungs and liver and other organs, and stop the circulation of the blood.

At the hem of a dress or petticoat, and also at the top, there should always be a piece laid in for being let down afterwards, in case of the material becoming frayed at the gathers or at the hem. A dress that can be turned should always be chosen, as one is then almost as useful as two.

The principal stitches required for making articles of clothing, are hemming, sewing, felling, running, gathering, whipping, stitching, back-stitching, and herring-boning. The difference between these stitches should be shown to children, and they should be made to explain them. In sewing hard calico, stick the needle into a piece of white soap, and it will go through the cloth quite easily.

To knit a stocking, with its mysterious intricacies of toe and heel, is a necessary part of the education of the fingers. Not only is it a great saving of expense to have good strong stockings knitted at home, that will not wear out like the ones sold in the shops, but it is an excellent occupation laid up in store for the dark

days when eyesight begins to fail ; then the stocking-wire and nimble fingers will be found a great resource against unwilling idleness.

1. Stockings or other articles which are to be knitted round, require three needles to hold the stitches, and one with which to knit them off ; an equal number of stitches should be cast on each of the three needles, and an extra stitch upon one of them, to form the seam at the back of the stocking.

2. After casting on the stitches, knit one round plain.

3. Then rib from six to ten rounds, or more if approved, according to the size of the stocking, or the coarseness of the thread. The ribs are formed by turning two or three stitches, and knitting the same number plain ; and their use is to keep the top of the stocking from turning down. Children's socks require to be ribbed at least two inches deep, as it gives elasticity to the tops, and so preserves them from falling.

4. Turned stitches are formed by bringing the thread with which you knit to the front of the needle, so as to be next you, then passing the needle through the stitch, cast the thread round it, and turn the stitch back from you ; when a sufficient number of stitches have been thus knitted, return the thread to its usual place, and proceed as at first.

5. It may be observed, as a general rule, that the length of a stocking, before the narrowings, should be, at the *least*, equal to *twice* the width of the top ; so that as many *rounds* should be knitted as will correspond to the *number* of loops on the needles ; and for tall persons, a still greater length will be necessary.

6. To give the shape, narrow a stitch on each side of the seam, and *always* at a turned stitch knit five rounds plain, between each narrowing, except the last two ; the shape of the stocking will be improved by knitting an additional round or two between these, as the slope will be brought off more gradually.

7. One stitch should be left between the seam and the narrowings on each side of it ; to *narrow before the seam*, knit two stitches together ; to *narrow after the seam*, take off the second stitch, and having knitted the third, cast the former over it ; the narrowing on each side at the instep should be done in the same manner.

8. A full-sized stocking should be reduced by narrowing, nearly one-third part ; a child's not quite so much ; socks for children do not require narrowing, except at the instep.

9. When the stocking is a proper width at the ankle, continue to knit as many *rounds* as there are *stitches* on the needles ; in some cases, greater length will be required.

10. To raise the heel, reckon the stitches, and divide them into half, back and front, so as to form the heel and instep, and place the seam stitch *exactly* at the centre of the heel-needle.

11. Knit the heel in rows, back and forward, the alternate rows being plain, and turn stitch, so as to agree with the rest of the stocking, and it should be *square* before it is closed ; four or five narrowings should be made on each side of the seam before closing the heel, to give it a little roundness.

12. To close the heel, divide the stitches at the seam, placing half on each needle ; place these needles together, and, keeping the seam-stitch on a spare needle, take a stitch from each of the former, and knit them together, casting the first over the last, until all are knitted off, and one stitch only remains.

13. Take up the loops formed on each side of the heel, by knitting a row

through them; and on the second row, widen one stitch after every three you knit; the best mode of widening is to knit two stitches in one loop.

14. Narrow every second round at each instep, until the foot is the same width as the ankle; make a seam along the side of each narrowing, like the seam at the back. This both improves the finish of the foot, and serves as a guide for closing the toe; the instep-narrowings should be on the *heel-sides* of these seams.

15. The length of the foot, from the *inner* part of the heel to the first narrowing at the toe, should be equal to the *width* of the stocking *at the top*.

16. Then narrow for the toe; *double at the seams*, leaving the seam-stitch only between them; narrow twice, leaving three rounds between, twice leaving two, twice leaving one, and then every round, until fourteen or sixteen stitches only remain.

17. Place these two needles together, and join the toe in the same manner as the heel was done.

A different mode of closing the toe is as follows:—See that there are an equal number of stitches on each of the three needles; the first round narrow at the *beginning* of each needle, the next round, narrow at the *end* only; again, at the beginning only, and so on successively, until all are off; leave one stitch plain at the beginning and end of each needle, before and after the narrowings.

Another mode of closing the heel of a stocking: Knit the nine middle stitches of the heel in rows like the remainder, taking up one of the other loops with the last stitch of every row, until all are taken off; when this sort of heel is finished, nine stitches remain.¹

To know how to darn stockings well is not so common an accomplishment as it sounds. I fancy that few understand all the mysteries of the different species of darning—diaper darning, twill darning, wave darning, single diamond darning, bird's-eye darning, double diamond darning, and so on; and even the plain darning too often looks as if it were not darning at all, but only a sewing up of the hole. The rough edges ought to be drawn together, so as to make the fracture as small as possible—a piece of paper placed underneath to preserve the shape, the threads regularly taken up and let down, alternately beginning a good way on each side of the hole, and a loop of the cotton or worsted left at each end, as it contracts in the washing. Worsted stockings ought always to be run in the heels and toes before being worn, which will keep them whole twice as long.

Mending and altering are of great importance in household economy, as old things thus become

“Amaist as good as new;”

and one who has a loving heart prompting skilful fingers will soon learn to take the greatest pleasure and interest in every exertion

¹ See *Simple Directions in Needlework*, formerly quoted.

of ingenuity which she feels will make the most of the dear husband's earnings, and, at the same time, add to the comfort and improve the appearance of the beloved children, or add to the respectability of the pleasant home. The mother's dress may be made down for the elder girls, whose dresses may be made to fit the little ones, while the same scale may be followed with the clothes of the father and boys. All this may be done without other household arrangements being interfered with, by early rising and a careful management and improvement of time. Much more sewing might be accomplished than is usually the case in cottage homes, if the mistress had her seam always at hand when the idle visitor enters, who generally makes the hostess idle too !

Habits of order and method will greatly help in this branch of "domestic economy," as well as in every other ; when things come home from the wash, or are washed at home, they are often flung carelessly into drawers or boxes without being examined, and then, by-and-bye, come the despairing discoveries of strings and buttons wanting, or stockings full of holes. They ought to be carefully looked over twice, first before being washed, when they ought to be mended (except stockings, which ought always to be mended afterwards), and second, before being put away, when those that require anything more done to them must be put into a basket apart. When the washing-day is early in the week, as it ought to be, there will be plenty of time to have all repaired and in order before Saturday night. Careful housewives must remember that sheets may be turned twice—first, the sides into the middle, and then the ends into the middle.

"A stitch in time saves nine," is a proverb that ought to be written up in letters of gold over against each housewife's mending basket ;—and not only does that timely stitch save nine stitches,—and thus many hours, but it will save many pennies, for it takes more materials, as well as time, to mend great holes instead of little ones.

It is well to bear in mind that "cheap goods are *not* good"—at least not the cheapest ; there will generally be much more use got out of the article for which a fair price is given, than from the "wonderful bargain." Calico, flannel, cotton-prints, and coburgs, are the principal materials of dress which are useful for cottage-wear ; and there is a material called derry, which is cheap and strong, and therefore suitable for working dresses. Calico costs

from 2d. to $4\frac{1}{2}$ d. a yard, and should be bought unbleached. Welsh flannel is the best ; union flannel is a mixture of cotton and wool, and is cheaper and very strong. Red flannel is a better and warmer material for petticoats than white. Good washing prints cannot be got under $4\frac{1}{2}$ d. to $6\frac{1}{2}$ d. a yard ; lilac is always dearer, but it stands washing better than other colours. Coburgs make very nice Sunday dresses, but are not nearly so warm as linsey woolsey, which, besides, last longer and turn, and afterwards can be made into excellent upper petticoats.

The Book which is intended not only to teach eternal life, but how to live in temporal life, is not silent upon the subject of woman and dress. Even as the holy women of old adorned themselves, so God-fearing women, in the present days, are to put on the ornament of a "meek and quiet spirit," and to eschew those of unsuitable and "costly array."¹ Modest apparel is recommended to them. The apostle would not have considered his commands obeyed by either of the two classes so frequently seen :—

1. Those who, except on "high days and holidays," obey too literally the words, "Take no thought what ye shall wear." There is a proper regard to appearance—a care to secure proper apparel, which women would do well to practise ; only, it must be for home eyes, not for strangers ;—it must be for the whole day, not for a small part of it. A common answer is, that Dick and Thomas "don't care." That, however, is part of the evil ; they ought to care, and they used to care, but they have been so long accustomed to dirty caps, and curl-papers, and ragged gowns—things unseen and unknown when they went "a-courting," that they have sunk into a careless and loveless indifference, which is but another stumbling-block to the proper influence of women. Untidy, slovenly habits prevent all women from respecting themselves, and being respected by others ; but the married woman has an additional motive for neatness and propriety, even "that she may please her husband." A regard to what is becoming as well as tidy is not unworthy of our attention, provided it is kept within proper bounds, and done from right motives. In a world where so much beauty of all kinds has been freely given, to bless the eyes on which the Creator also bestowed the power of seeing and enjoying, it cannot be right, unnecessarily, to cultivate what is jarring and uncomely to the

¹ See 1 Pet. iii. 3, 4 ; and 1 Tim. ii. 9, 10.

sight. There is no occasion, therefore, for women to make "frights" of themselves. It is always quite as economical to buy a pretty dress as an ugly one ;—a green ribbon with a lilac gown, or a purple ribbon with a yellowish brown, or a red ribbon with a black will not cost more than the pink and yellow, the blue and scarlet, the green and orange, which offend the eyes of the spectator, and are tawdry and unbecoming.

2. Those who, to use a homely phrase, "put all their earnings upon their backs," and whose whole aim and wish is to dress like those above them in station, and to outshine those of their own rank. It is a mistake to think that fine dressing makes working women look like ladies. The woman carefully, yet easily and comfortably dressed, in a pretty print or gingham, and a nice straw bonnet, trimmed with a darkish ribbon, which will not look faded or dirty before another can properly be afforded, will look much more truly ladylike, at a smaller cost, than in her silk gown, costing £3 or £4, or her flowered and feathered bonnet, which, after the first shower of rain, is useless and battered. The money thus saved will go far to assist her parents' need, and rejoice their hearts, and to procure books for herself, by which she will reap much more true enjoyment, and make herself much more respected.

Lieutenant Tracey, late governor of the Westminster prison, gives the following painful testimony upon the subject of fine clothes :—
 "I could adduce numberless instances of the baneful effects resulting from an inordinate fondness or love of dress, amongst the young females consigned to the many prisons in and about the Metropolis ; and from an experience of twenty years and upwards, my conviction is, that the increasing number of such persons (females) who early lapse into crime from this too apparent cause, is nearly in the same amount or ratio with those of the opposite sex who yield to the influence of strong drink (*i.e.*, drunkenness), another prolific source of misery and degradation, who, with the parties before alluded to, tend to crowd our houses of correction in this country. This is no new theory, but the evidence of a lengthened acquaintance with such poor outcasts."

I cannot conclude this chapter without a few words concerning the dress of those who are to teach others how to dress as becomes their station. Example is better than precept, in this as

¹ Appendix to Miss Burdett Coutts' *Prizes for Common Things*, 1854-56.

well as in many other things, or rather, example and precept ought to go hand in hand. A scrupulously neat, cleanly, modest style of dress, useful and inexpensive ; subdued, but pleasing in colour ; plain, but well-fitting in shape, with an absence of troublesome curls, unnecessary ribbons, and flounces and dangling ear-rings, will entitle a teacher to a respectful hearing of the words which are often wasted, because felt to be inconsistent and almost insulting, when spoken by one who does not "practise what she preaches."

CHAPTER VI.

WHAT SHALL WE DO IN THE HOUSEHOLD ?

IN the course of your future lives, as teachers of National Schools, you will have under your care many girls who are to perform an important part in the work of their native country. I allude to those who are to be household servants. It will be a part of your duty, therefore, to endeavour to implant in their young minds a sense of the responsibilities which will rest upon them. The frequent complaints and accusations of bad servants, which meet the ear in common conversation, doubtless often proceed from bad mistresses ; but it is a distressing fact, that in this large class there is a far greater want of principle and moral qualities than might have been expected, considering the advantages they have, and the important posts they occupy. A celebrated preacher was once taunted with the fact, that his large congregation was almost entirely composed of servants : “ I am thankful that it is so,” he replied ; “ it is of more consequence to convert them than their employers.” “ Why so ? ” it was asked. “ Because they have the care of all the children.” They have, besides, the charge of much substance ; they can make much mischief, destroy much comfort, and do much good. If no other field of usefulness were open to you than educating many of this class, you might feel honoured that you were chosen to such an important service. Most household servants have been to school ; it is, therefore, more than likely that there would not be so many bad servants if there were more good teachers. Above all other teaching, and including all, see to it that, with God’s blessing, you teach your pupils—

To be conscientious.—It is those servants who do all their work “ as unto the Lord,” who will do it well “ as unto men.” There

is no household duty so small or humble that may not be performed in the likeness, and by the example of the Saviour, who "made himself of no reputation, and took upon him the form of a servant." Household service is God's own institution ; and in His holy Word, He has stated His views and wishes with regard to those who serve, as well as those who are served.¹ The reality of a servant's religion must be proved by the energy and conscientiousness of her daily work, so that at one and the same time the service of God and man may be successfully carried on. It will be of great consequence that you teach your pupils—

To choose a good place.—It must not be the large wages or the easy work, or the gay doings, or the indulgent mistress, that weigh in the balance. It is to be a "home," not a "place;" it is to be a school where habits of industry and patience are to be formed, and where many kinds of useful and practical knowledge are to be learned, which will be a blessing to a woman in her whole future life. None of these advantages are likely to be gained where there are bad fellow-servants, lax discipline, careless and ignorant mistresses, and a want of all religious privileges and instruction. There must be a choice made, not at random, but with prayer and thoughtfulness, so that what is good for the soul, and not only for the body, may be taken as the "good part."

There are several excellent, but not very common qualities, without which there cannot be a really good servant. I shall mention :—

1. *Humility.*—One increasing fault of modern servants is, that they cannot bear to be found fault with ; they spurn the idea of being "under the yoke," and they are becoming more and more "heady and high-minded." This is contrary to their best interests in both worlds. Nothing makes a more unhappy servant than the want of this rare and beautiful grace of humility : they are ever on the watch to take offence ; as they cannot bear to be told of their faults, they never get the better of them ; they "answer again," and thus disobey God's word ; they alienate the affection and esteem of their employer, and lose rather than gain the respect they are so anxious to obtain, by exalting themselves above reproof ; they are constantly at war with the other servants, and are afraid of compromising their dignity by doing any work but their own. The cook will not help the housemaid, the housemaid

¹ Col. iii. 22 ; iv. 1 ; Eph. vi. 5-9.

will not take a message to the laundry-maid, and the little community, which ought to be like a family, is turned into a collection of proud seowling enemies.

2. *Thoughtfulness*.—This is a great and rare quality in a servant. To think of things at the right time is the secret not only of being a good servant, but of being good for anything in any position. The thoughtful servant *considers* what her mistress likes, and *why* she likes it, and what else she would probably like, without being at the trouble to order it,—she does not let the fire go out on a cold day, or heap it into a furnace on a hot one,—she does not arrange the furniture differently every morning, but remembers how it ought always to stand ; her design is to save trouble, not to give it. By thoughtfulness and consideration she will also be showing *kindness*, that blessed gift,—one of the few which can be interchanged between rich and poor, high and low, young and old.

3. *Cheerfulness*.—A bright face and a pleasant manner are more attractive to a mistress than can be imagined ; in the midst of troubles and anxiety, instead of being weighed down by the burden of an ill-tempered gloomy servant, full of difficulties and complaints, she feels the cheerful, happy, willing attendant to be like a sunbeam of comfort. It is a charm which all may possess, for the plainest face may be lighted up with the smile from the unselfish heart within.

4. *Contentment*.—These two last qualities depend much on each other, but the last is even more rare. Many a servant with a cheerful face and temper is yet constantly changing her place. She is always in hopes of “bettering herself,” and finds some fault in each place which she hopes to escape in another, or she tires of being a housemaid, and tries her hand at cookery, and then thinks that she would do better in the laundry, or finds out that, after all, she has “a turn” for children, and so she goes on “like a rolling stone,” never gathering “moss,” and never making herself perfect in any one branch of household work.

5. *Activity*.—A slow servant, who is always behind-hand, who “takes her time” for answering bells, who is never ready, who is always “just finishing,” but never seems to have quite finished her work, is a great trial to an active mistress ; and not a trial only, but also an injury, for the time is hers, and not the servant’s to waste, so that it is a form of absolute robbery. Procrastination

is often at the root of this evil ; many a servant who is tolerably quick at what she does do, is yet no further on than those whose fingers seem all to belong to the left hand. She is always putting off till to-morrow what should be done to-day—this instant ; and according to the Spanish proverb, “ By the street of By-and-bye, she arrives at the house of Never.”

6. *Honesty*.—It is a strange thing how some consciences seem made of India-rubber, that elastic, easily-bended substance, when this quality is in question. Those who would be ashamed and indignant were they to be accused of breaking the eighth commandment, yet contrive to reconcile it in their own opinion, and are much astonished if not in their mistress's also, with “ taking ” pins, needles, wax, pencils, spoonfuls of jelly, pinches of tea, and so on. It must be impressed tenderly but faithfully on their minds, that it was not said, “ Thou shall not steal GREAT things,” but simply, “ Thou shalt not STEAL ; ” and that God's holy commandment meant, amidst the thunders of Sinai, what it means now, that it is broken by “ taking ” the smallest atom of what is our neighbours', as much as by stealing the purse and the jewel-box. Besides which, few stop at small sins ;—even as from the little acorn springs the huge oak, so from the little theft, surely but silently, grows up the great crime.

7. *Truthfulness*.—Like the last, this is a rare quality, the consciences of servants often becoming strangely seared ; so much so, that they seldom say or think that a LIE is a LIE, but only a little “ harmless fibbing,” or a “ white lie,” to vary its name occasionally. Very often a little truth is mixed up with what is said, or words with two meanings are employed, or there is prevarication ; but often even these ceremonies are omitted, and false affirmations are boldly given without compunction, because the things affirmed are “ just trifles, and don't do anybody any harm.” Independent of the awful sin against God, servants ought to be warned, that they thus destroy their usefulness and comfort in their adopted houses. No master or mistress can feel confidence or friendliness with those whom they have learned to distrust. Want of truth is a barrier which no other advantages can throw down.

8. *Economy*.—Wastefulness is a fault which ought to be carefully guarded against, both as concerns the servant's own property, and that of the employer. To waste the candles, soap, meat, sugar, which the latter has given in charge to be used to the best

advantage, is only another form of dishonesty. With regard to servants themselves, improvidence leads to much evil, for it causes habits of waste and extravagance, which prevent any saving of their wages, and which cannot be shaken off when they have houses of their own. Wretched households, discontented wives, and ruined husbands are thus frequently the result, when women marry from service, or destitution in old age when they do not.

9. *Modesty*.—The statistics of crime tell us, that there is a fearful proportion of household servants to be found in the ranks of sorely degraded and degrading women. It is a fashion of the day to speak and to write about this “great social evil,” and the various ways of treatment and restoration of the fallen ; but surely there is not enough said, and still less done, to *prevent it*. Mistresses of families can do much by the care they take of their young servants, by providing for their safe and healthy amusement and occupation,—by strictly watching over their companions and their habits,—and by tenderly and judiciously encouraging and teaching them ; but teachers can do more, by bending the supple tree in the right direction at an earlier period. It is a solemn responsibility, but a blessed one. To prevent is ever easier than to cure. Watch over the young girls then ; teach them that the smallest wandering from the strait path of modesty—the coarse jest permitted, and then laughed at, the flaunting dress, the flirting manner, the loud laugh, the giddy walk home at night, the lingering in the street with idle companions, the love of admiration, the belief of foolish flattery, may, and probably will lead to consequences too awful for the mind to dwell on. And young women who are to be teachers, remember this, that you must show an example in each one of these things, or else your words will be worse than wasted ; they will but increase the evils they dare to censure.

The preceding remarks refer to all servants. I shall now add a few words on the separate duties of each.

I. **The Housemaid**—whose general work is to look after, and keep in thorough order, every part of the house. She lights the fires in the sitting-rooms and bedrooms,—she dusts and polishes the furniture,—she makes the beds, washes the floors, beats the carpets, and generally takes charge of the bedroom linens. In a

small establishment where there is no man-servant, and no separate parlour-maid, she waits at every meal, and keeps in order the plate and other articles required for the service of the table.

It is of importance to a housemaid to know how to light a fire. There are few things more provoking than the strange heedlessness and want of intelligence of the bad fire-lighter,—the bell rung again and again, on a cold morning for the maid, who again and again rattles and puffs and pokes without any better success than a few puffs of smoke ! The ashes ought first to be cleared out, and replaced by a little crumpled paper or dry light brushwood, or carpenter's wood shavings ; lay over them some dry pieces of fire-wood, some of the best cinders and a few small pieces of coal ; then set fire to the shavings, *not* with the candle, but with a lighted match ; afterwards throw small coal at the back, and a piece or two of larger coal in front, and a little small coal all over the top. Care must be taken to leave a little "chimney" or opening in the fuel, so as to admit a draught of air, without which fires will not burn. A newspaper or rag held up before the fire, so as to exclude the external air, will often make it burn brightly at once, though care must be taken not to set this screen on fire. The sun ought never to be allowed to beat on the grate, as it quenches the flame. If there is smoke on first lighting the fire, it can sometimes be stopped by a large piece of lighted paper being held a little way up the chimney above the fire, which forces the smoke to go in the right direction. Lighted coals ought *never* to be carried from one room to another—a common and dangerous custom adopted to save the trouble of kindling in the usual way ; it is dangerous in every case, but especially where there are wooden stairs and lobbies. It is very common also to find that the housemaid has carelessly left upon the floor one or more lucifer matches, which, when trodden upon, have in several instances produced death by burning. When the fire is low, it ought never to be *drowned* with coals, as is so often the case—thus completely extinguishing the feeble flame, and in an ill-behaved chimney infallibly producing smoke ; all the bright embers ought to be raked in front, and a few small pieces of coal thrown behind, which will soon burn, when more may safely be added.

Before leaving the subject of fires, it will not be uninteresting to pause a moment and ask what is *Coal*, that important article of fuel ? Black and dirty and unsightly as it is, will you not be

astonished to hear that thousands of years ago it formed part of a forest of waving trees with massy stems and green foliage, lighted by the sun and freshened by the wind, and made musical by birds and humming gauzy-winged insects? Yes, coal was once wood! A change came over the fair forest, age drew near, and decay bowed down its branches and withered its verdant leaves; then the old stems sank down into the soft ground, and were covered over deeper and deeper by soil and gravel; not idle though: oh no, for there in the depths and the darkness the patient wood was slowly turning into the coal, which ages after was to bless millions with the warmth of fire and the light of gas.¹

It is often thought a sign of an active housemaid when all the beds are made immediately after the occupants have quitted their rooms. You will remember, however, that for reasons given in Chapter II., Section V., this is far from being a healthy or praiseworthy custom. It is absolutely necessary that the bed-clothes should be flung off each bed every morning for at least half-an-hour before it is made;—nothing should be allowed to interfere with this, and as other parts of the work can be done in the interval, there will not be any waste of time.

Housemaids should be most careful and conscientious about having bed-linen thoroughly aired;—many a lifelong cold has been caught, many an early death has occurred, humanly speaking, in consequence of the carelessness of servants in this particular.

¹ Since writing the above, a pamphlet called *How to save Half your Coals*, has been sent to me by a friend, who has tried the method recommended, and found that it was literally true, for whereas in his drawing-room he has hitherto used three buckets of coal in the day, he now uses one and a half. A piece of iron plate, which may be bought at a foundry for fourpence or sixpence, is put across the bottom of the grate, projecting about an inch and a half in front, with a narrow opening for it at each side. The grate must be filled with English coals; place above them the shavings or waste-paper, and a few bits of dry wood, set fire to it at the top, and in a quarter of an hour the fire will have burned downwards into a cheerful blaze. There will be no rapid burning away of the coals, which will require very small replenishing in the course of the day,—no necessity for poking, that difficult and delicate operation requiring a seven years' acquaintance,—and no smoke, which is only another name for waste of fuel. In the same pamphlet I find two admirable hints quoted from Mrs. Sarah Hall, an American authoress;—"Preserve the coal-ashes, which are usually thrown away as useless; when you have a sufficient quantity, add to them an equal bulk of small coal or coal-dust from your cellar, and then pour a little water on the mixture. Use this compost at the back part of your fire—it will burn brightly and pleasantly."—"Mix one bushel of small coal or sawdust, or both, with two bushels of sand, and one bushel and a half of clay. Take water, and make the mixture into balls, pile them up in a dry place till they become hard. When your fire burns brightly, put some of them on the top, and they will give out a strong heat." This pamphlet costs 1s., and is published by Burns and Goodwin, Bath.

Sheets of paper ought to be pasted together and laid upon the tops of beds, so that the dust which gathers there can be easily and frequently removed. I shall not, however, go over the different parts of duty required of a housemaid, because they are so many that my limits would be far exceeded, and they are, moreover, clearly and minutely stated in an admirable little book accessible to all.¹

II. The Laundry-maid.—Soft water is better than hard for washing, and when not sufficiently so, must be softened by soda. Everything ought to be ready the night before, so as to allow an early beginning the next morning. Tuesday is a common washing-day, because it gives time for preparation on Monday, while everything can be finished without hurry or confusion before the end of the week. This is a rule often neglected in small households, and in cottage families especially, where hurried washings are often seen on Thursdays, Fridays, and even Saturdays, putting every other arrangement out of order, and making everybody and everything as uncomfortable as possible.

In 1849, a "Washing Secret" was advertised, or "How to accomplish a six weeks' wash before breakfast, for less than sixpence!" The very idea of a "six weeks' wash" was enough to scandalize any respectable housekeeper, for it is very far from a cleanly or economical arrangement to keep unwashed clothes so long, but still the "secret" was worth knowing, so half-a-dozen bottles of the mixture which professed to accomplish such wonderful deeds, were submitted to "a jury of matrons." After a fair trial, they returned a verdict in these words, "A very good thing indeed." Dr. Andrew Ure, a celebrated chemist, also subjected it to chemical tests, and pronounced it *not* injurious to the fabric of linen—a result which had been apprehended. Since then it has come into more general use, and is adopted in training-schools for domestic knowledge. I shall give the receipt itself; Mr. Jesse Dobill's (of Hertford) modification of it; and Mr. Twelvetrees' instructions:—

1. "*Receipt.*—Half a pound of soap, half a pound of soda, and a quarter of a pound of quick lime. Cut up the soap and dissolve it in half a gallon of boiling water; pour half a gallon of boiling water over half a pound of soda; and a sufficient quantity of boiling water over the quarter pound of quick

¹ *Finchley Manual. Household Work.* See chapters on "Maid-of-all-Work and Housemaid."

lime to cover it. The lime must be quick and fresh ; if quick, it will bubble up on pouring the hot water over it. Each of these must be prepared in separate vessels. Then put the dissolved lime and soda together, and boil them twenty minutes ; after which pour them into a jar to settle."

2. Mr. Jesse Dobill's modification :—

"Instead of preparing each of the articles by themselves, dissolve the half pound of soda overnight, in one gallon of boiling water, pour it on the lime and let it settle ; cut up the soap and pour the clear water (*i.e.*, from the lime and soda), upon it, and in the morning it will be a dissolved mass fit for use. If prepared in *this* manner, the twenty minutes' boiling of the dissolved lime and soda is entirely dispensed with. In either of these processes, soft curd, or common yellow soap may be employed. But it is of importance that the lime be white and quick—the latter may be known by the hissing and bubbling resulting when the water is poured upon it ; if this does not take place, the lime is unfit for the purpose."

3. Mr. Twelvetreets' instructions how to proceed after having made the preparation :—

(1.) "Set apart all flannels and coloured things, *as they must not be washed in this way*. They may be washed in the usual way, in the intervals while the other things are boiling.

(2.) "Soap the collars and wristbands of shirts, the feet of stockings, &c., and rub them a little. This must be done the previous night, and the clothes set to soak until the next morning.

(3.) "Next (*i.e.*, in the morning) pour ten gallons of water into the copper, and having strained the mixture of lime and soda well, taking great care not to disturb the settlings, put it, together with the soap, into the water, and make the whole boil before putting in the clothes. A plate must be placed at the bottom of the copper to prevent the clothes from burning.

(4.) "Boil each lot of clothes from half an hour to one hour. After taking them out, rinse them well in cold blue water ; when dry, they will be beautifully white.

(5.) "The same water will do for *three lots*. The finer things should be done first, the coarse and dirtier afterwards. The mixture, after having been used for the clothes, may be employed to clean silver, brass, copper, tin, or any other description of metal. After washing, they should be dried and polished with leather. The liquid may then be used for scouring floors or cleaning paint. Thus it undergoes a variety of transmutations, all essentially serviceable to the housewife."

Here is also a good receipt for clear-starching :—

"*Clear-starching*.—Having collected all the articles that are to be starched, put a pint of clear spring water into a clean saucepan, and when it is just warm, add a quarter of a pound of starch (that has been previously softened with a little warm water), with a little gum-arabic or isinglass. Then continue stirring it one way until it just boils, when it must be immediately taken off the fire, as it will become yellow if it boils too long. It must then be strained, and allowed to stand until it is fit for use ; a piece of loaf-sugar will tend to make the starch much clearer than it would

otherwise be, and a little mutton-suet put into the starch will prevent the articles from sticking when they are ironed. Some persons use a candle instead of this, with which they stir the starch while it is on the fire. English people usually starch their clothes in a dry state, but the French prefer starching them while wet ; because the former method not only tends to fray the articles, but makes them stiff, and of a yellowish tinge. When the articles have been starched, they should be clapped, during which process the hands should be frequently washed, to free them from the bits of starch which adhere to them. The articles should then be folded in a cloth, ready for ironing.

“ Fine muslins, collars, &c., should first be ironed slightly on the right side, and finished on the wrong side. In ironing a shirt, the back should be done first, and a board of the proper size, covered with flannel, should then be placed between the back and front to iron the front upon ; and it should be allowed to remain in until the other parts are ironed. Dresses should be ironed on a board that is about as wide again at the bottom as it is at the top.”¹

III. The Cook.—As a good deal of Chapter III. and the whole of Appendix A. comes within the province of the cook, I shall only further notice the following requisites :—

1. *Cleanliness.*—Needful in all positions, and especially in each department of household work, it is of even greater consequence in the kitchen. If the housemaid or the laundry-maid be uncleanly, a great deal of discomfort is produced, but an uncleanly cook may produce *death*. If copper saucepans be not kept in a thoroughly sweet wholesome state (and a great deal of care and trouble it takes to do so), the copper is covered with a green rust called verdigris, which is a poison of so rank a nature, that many fatal accidents have happened in consequence of food being prepared in such vessels. All utensils used in cooking, and especially all saucepans, ought to be washed immediately after being used, turned up to drain, and then carefully dried. Pudding-cloths ought never to be washed with soap, as it gives them an unpleasant taste and smell ; they ought to be scalded and dried. The water in which vegetables are boiled, especially cabbages, must be immediately thrown away, as it fills the whole house with its unwholesome odour. Pins and needles found in food show unpar-

¹ See also *Finchley Manual*. Household Work. Laundry-maid's Catechism.

donable carelessness and untidiness in a cook, and may cause frightful accidents ; if less dangerous, it is no less disagreeable to encounter dirty pieces of string, flakes of soot, grains of sand, caterpillars, or last, though not least, long hairs suspiciously in harmony with the cook's complexion !

2. *Regularity.*—By this I mean doing things the same one day as another ; this does not sound very difficult of attainment, but must present great obstacles, to judge by the rarity of having things cooked two days alike. A cup of arrow-root is made to perfection one day, but the next it is thick and lumpy. A curry is just sufficiently spicy,—the next time no one could eat it but a Salamander. The soup of yesterday and to-day could not be recognised as relatives ; and the puddings with their seasonings might be the handiwork of those two different individuals—an excellent cook and a scullery-maid in her first situation. The whole mischief arises from want of regular measures : it is true that a “spoonful” of arrow-root or curry-powder has been faithfully put in, but the cook has taken no heed that one day it was scarcely full, the next heaped to overflowing, while salt, cinnamon, sugar, and other seasonings have been thrown in as the fancy of the moment dictated, or, in some not unusual emergency, forgotten altogether. Having first ascertained the tastes of the family, the good cook will take care to have just the same measure of ingredients one day as another, so that her mistress may have the satisfaction of being able to trust to a creditable production being repeated.

3. *Order.*—Were the dresser-drawers or the cupboards of many a kitchen to be examined, they would present as extraordinary a medley of articles as the receptacles of poor Aunt Dinah, so amusingly described in *Uncle Tom's Cabin*. “A place for everything, and everything in its place,” is a good old maxim, which cooks, of all people, should never lose sight of. Bread, butter, milk, salt, pepper, mustard, cloves, and all the other articles required for each day's cooking, should have their distinct places, and be returned to them so punctually that they could be found again “in the dark”—another good old-fashioned test of having things in perfect order.

4. *Punctuality.*—Nowhere is this rare virtue rarer than in the kitchen. Most cooks seem to have a natural incapacity for hearing the clock strike, or do not seem to think that they have any

concern with that operation. Yet an unpunctual cook will annoy and seriously inconvenience the master and mistress, will put household and business arrangements in confusion, try the tempers of all the members of the family unnecessarily, and even derange health as well as comfort, for regularity in meals is highly conducive, and indeed necessary, for proper digestion. Whatever her other good qualities may be, the unpunctual cook is worth little as a servant. Even the fatal "five minutes," often claimed as a right, ought to be surrendered, and as the clock strikes the hour, the dinner ought to be on the table.

5. *Economy*.—If this were generally a culinary virtue, I doubt whether the policemen would be so proverbially fond of the kitchen, or whether cooks, however old or ugly, would have so many more "followers" than other members of the household. A strictly honest cook must remember that it is only her own property which she has a right to give away, not that of her master. Neither has she a right to what are called "perquisites," unless such have been distinctly stated and allowed at the time of the engagement. Neither is she at liberty to waste materials of food bought with other people's money, whether she is servant in a rich or poor establishment, thus throwing away money which might keep many a poor wanderer from starvation or from crime.

"There are few cooks who are not extravagant in coals. A good fire is essential while cooking is going on, which may, perhaps, be the cause of the habit they acquire of keeping a large one at other times of the day. A cook should never suffer her fire to get very low ; for she wastes both much coal and time by this negligence. A fire should be regularly supplied with coals, which would prevent it from ever being so smoky as to be unfit for use at a few minutes' notice ; and it should be generally known that smoke is merely unconsumed coal : and if it get low, when anything is required to be prepared quickly, the cook has no resource, but to apply the bellows furiously ; so that, before the fire burns properly, much must be wasted. The ashes should be riddled from the cinders, and these reserved to throw on the back of the kitchen fire, after cooking is over ; or they will serve to burn in stoves and ovens, when once the fire under them has been lighted. Extravagance frequently proceeds from a careless indifference to the interests of her master and mistress. It is part of the cook's duty to take such charge of meat, beer, bread, butter,

cheese, and all the articles of common consumption, as shall prevent any degree of waste. Accumulations of small pieces of bread ought never to take place with a conscientious cook, who will always insist upon having these fragments eaten by the servants before fresh pieces are cut from the loaf. When there are any pieces left, she can pour boiling milk over them, and prepare a common bread-pudding for the early dinner. There is a frequent waste in the consumption of beer, owing to too much of it being drawn at a time. When this happens to be the case, a thoughtful cook will remember that a crust of bread put into it, and the jug covered over, will, for a short time, prevent it from becoming very flat."

IV. The Maid-of-all-Work.—This is generally considered a very hard position to fill, and is often looked down upon by other servants ; but this is a great mistake, for when the one servant is full of activity and energy, and wise arrangement of her work and her time, and when she has won the confidence and friendship of her master and mistress, she is perhaps in a more comfortable, and certainly quite as respectable a position as those who have one or more "neighbours." It is, indeed, a more responsible situation than any other, for if she is negligent and ignorant, everything in the household goes wrong, there is no one else to fall back upon, and much more knowledge is required than of any other servant, for while others have only to perfect themselves in one branch of household acquirements, the maid-of-all-work has to be acquainted with all. I need not enlarge, therefore, upon the duties of such a servant, for those belonging to the housemaid, the parlour-maid, the cook, the laundress, and the nursery-maid, are those which she must sustain in her one little person ! Let her take courage, however, and do her best, animated by the thought that if faithful, she may be one of the greatest earthly comforts to her careworn mistress and hard-working master.

V. The Nursery.—Careful and sound instruction is, above all, necessary for those numerous young girls who intend to become nursery-maids, and "have the charge of all the children." Some undertake this arduous duty because they think it will be easier work, some because it is more "genteel" than scrubbing, and washing, and cooking ; others because they have a natural love of

children ; but few, how few because they may thus help to train up young immortals to live in the presence of God ! These things, however, it will be your part to teach them. Some of the following remarks will not be out of season to any of you who are in training to become infant-school mistresses, a position of much responsibility and influence ; while in your instructions to those who may afterwards be at the head of families of young children, they may also find place. Nursery-maids ought, indeed, to consider themselves in the light of mothers, for they have almost as great, and in many instances even greater influence, as the children are more constantly with them, and, indeed, if they have not much of maternal tenderness and wisdom, they will do little good in their solemn charge. Here are some homely and practical pieces of advice which you might offer to young girls whose next step is to be from the schoolroom to the nursery.

1. *Don't deceive the little children.*—Surely the awful prevalence of want of TRUTH must proceed from habits taught and learned in the nursery. If beautiful, upright truth dwelt *there*, it would never be forgotten in after life. Nurses may think little of the “small” deception, and deem unnoticed and forgotten the promise given only to be broken, the false assertion that the bitter medicine is “nice,” or that a black man is coming down the chimney, or the command “not to tell” the truth to papa or mamma, which is to compromise the nursery-maid,—but the child lays up every atom of untruthfulness in its memory, and when a convenient time comes, will put it again into practice.

2. *Don't be always threatening.*—This is a common fault of mothers as well as of nurses. A child refuses to obey, and a long string of threatenings are heard going on : “I'll punish you ;” “I'll send you to bed,” and so on. The child remains obstinate, and the threatenings recommence. This goes on alternately, till the child is getting tired, and considers that he has got a victory ; he has made his mother or nurse very uncomfortable, and given her a great deal of trouble, so being satisfied he graciously yields. The mother very probably prides herself on her firmness in having conquered little Johnnie, whereas to bystanders it is very clear that he has conquered her. Prompt, cheerful obedience ought to be insisted on, and whenever punishment is threatened, which ought to be a last resource, it ought to follow surely and speedily. If a punishment ought never to be threatened which is not to be

performed, unless there is prompt repentance, neither should a command be given which is not intended to be obeyed ; nothing wears out influence and the habit of obedience sooner than this error. When I speak of prompt punishment, I do not mean that it is to be done under the impulse of anger ; that is ruinous to all good and holy influence : when irritation is strongly felt, wait till you are cool again, and then reprove or punish.

3. *Don't teach revenge.*—This is never, I should think, intentionally taught, yet how surely the spirit of it is implanted in the susceptible little heart, when a child is taught to beat the ground, or say angrily “naughty chair,” when he falls or knocks himself ! The next wish will certainly be, when hurt accidentally or in earnest by others, to beat in return the offending brothers or the “naughty” sister. Some people go to the other extreme of making children pat the ground, or say sympathizingly, “poor chair ;” but it is equally untrue and remarkably silly, and it is far better to fall upon some other way of diverting the pain and fright. Being told a little story,—being allowed to touch the keys of the piano,—or being sent on a message, will have a much better effect.

4. *Don't teach or encourage useless fears.*—Cowardice is one of the faults which grown-up people find exceedingly difficult to get over, even with the help of reason and religion, *because* it has strengthened with their strength, and grown with their growth, from the earliest nursery days. Not only do unprincipled nursery-maids fill children's minds with fear, to keep them quiet and make them obedient, but even the more conscientious seldom take pains to eradicate the little panics and terrors which children take, and which, though easily dispelled at the time, become obstinate in course of time, and render their grown-up victims a prey to nervousness and timidity, though of different objects. Fears of wild beasts, of gipsies, of sweeps, of dogs and cows, of dark corners, and thunder, may all be cured by gentle, kindly, and judicious treatment. Little stories of the care of God over those who trust in Him, of the loving angels who keep watch beside us, of brave men and women and their noble actions, will all sink into the mind,—while anecdotes may be related, and interest and kindness excited towards the very objects of terror—the little sweep, the big black dog, or the cart of gipsies. The story of the little boy who was not afraid in a storm at sea, “because

my father's at the helm," is a favourite one, and may have a higher meaning given to it. I remember some young children, from three to five years old, being so struck by the story of Grace Darling and her bravery in going out in the dark stormy night to save lives, that when sent into a dark room, previously the object of their especial dread, they would say stoutly, "Now, we'll be Grace Darlings; we won't be frightened." Too much pity for little hurts and little accidents is bad for children, it gives an unhealthy craving for sympathy, and makes them cowardly in bearing pain. "Let me see what a strong boy or brave girl you are," will do much more good than all the patting and caressing, which only encourage tears to flow; a very bad lesson, by the way, for women, who in future life are too apt to yield to the weak and contemptible habit of shedding tears upon every slight emergency, and considering themselves as models of feminine sensibility for so doing.

5. *Don't awaken envy.*—It is sad to hear comparisons continually made in the nursery: "Look how good Miss Amelia is!" "What a difference between Miss Kitty and Miss Sophy!" or attentions paid to one child, pointed out to another, who is kept in the background because she is plain, or awkward, or shy. Ah! little we know how the throbs of the little heart may be turned from love and anxiety to please, into envy and hatred against the "favourite," and against the injudicious nurse, thus in after life producing much of the want of harmony so often seen in families of grown-up brothers and sisters.

6. *Don't talk nonsense.*—The perpetual joking and teasing of children about lovers and kisses may do much to sully the purity and unconsciousness of little hearts and childish thoughts, besides being a bad habit for nursery-maids themselves. Children *never forget*—would that that awful truth were more remembered and acted upon!—much frivolity, coquetry, if not worse things, may be traced to the nursery jokes, to the eagerly listened-to stories, gossip, and foolish conversation, not always the most pure and modest, which go on among the nursery guardians of little minds, and which are as carefully treasured up as if addressed to them personally.

7. "*Don't be always don'ting,*" was an excellent piece of advice which I met with lately in a book upon education. Children are, or ought to be, happy little beings, exempt from most of the trials

of this weary world of care and sorrow. It is a pity to bring them too soon under the universal lot, by unnecessarily thwarting their little pleasures, refusing their requests when reasonable, or checking their mirth when harmless. Even for children there are plenty of necessary "don'ts" without adding needlessly to the number. Besides, constant fault-finding soon loses its effect; when real and great cause of rebuke takes place, and is met by the same angry tone and brow that have been in use every hour of every day, they will be found completely destitute of power. The child thinks no worse of itself for the lie, or the theft, or the deliberate falsehood, than for the little piece of carelessness, or the accident which it could not help; all were treated pretty much alike, and it was sure of being scolded for something, so whether greater or less does not signify in its opinion.

8. *Teach them kindness to animals.*—This is a rare but needful part of nursery discipline. Had it been more common, there might have been fewer oppressors and fewer murderers in the world's history; for indulged cruelty to the few under a child's power, will inevitably lead to cruelty when that power becomes extended; cruelty to the dog, cat, or bird will end in cruelty to human beings. The Emperor Nero, who, when he was a man, loved to watch the early Christians expiring in agonies at the fiery stakes planted in his palace gardens—who set his glorious city of Rome on fire that he might gloat over the desolations and the sufferings—who wished that his subjects had but one head, that he might have the pleasure of cutting it off, was constantly occupied in childhood with the cruel amusement of killing flies. Truly, "the child was father to the man." It is touchingly beautiful to see the consideration for the dumb part of His creation, which ever emanates from the tender heart of God. He forbids the kid to be seethed in its mother's milk, and the mouth of the ox to be muzzled in treading out the corn, so that it may have its portion also. He gives orders for the ox and the ass to rest on the hal-lowed day as well as man. His observant angel thus reproved the sinful prophet, "Wherefore hast thou smitten thine ass these three times?" He deigned to mention the "much cattle" in the rebellious Nineveh as one of his reasons for wishing to spare the city in his long-suffering mercy. Solomon, the wise king, "be-loved of the Lord," says that "a righteous man considereth the

life of his beast, but the tender mercies of the wicked are cruel ;” and again, that “ a merciful man is merciful to his beast ;” while a greater than Solomon declared, that not one of the little sparrows which men take such small heed of, can fall to the ground without His permission, who is their Creator and Preserver as well as ours. These facts may not only form nursery stories and lessons, but they ought to teach the teacher herself to practise kindness to animals, and thus to interest children in them. The feeding of the dog, cat, and pet-lamb—the careful cleaning and supplying the canary’s cage with seed and sugar—the searching for groundsel for it in the daily walk—the crumbs saved for the winter robin redbreasts and other birds who can easily be induced to come regularly to the nursery window, are all actions of kindness which they could gladly join in and understand.

9. *Be consistent.*—Never think that you can teach your little charges to love one another if you are not yourself kind and loving to those around you ; never think that you can train them up in habits of obedience if you are yourself disobedient to your mistress. Never think that you can make them truthful if you yourself stoop to lies and deception ; above all, never hope to lead them to the love of God if your own heart be far from him.

10. *Be loving.*—It is a dreadful thing to hear a sharp voice proceed from the nursery, and a furious face appear at its door. No doubt the children have been naughty and very provoking, but is that the right way to make them good ? “ Love is power,” but wrath is weakness. Children quickly see that it is only because you are selfishly angry, and “ put out,” that you reprove in such strong language—not to make them better ; and so the good lesson is lost which might have been learned. One gentle and sorrowful reproof is of more value than many reproaches and many blows. Love and you will be loved ; make yourself worthy of love, and a rich harvest awaits you. “ Oh, great or little one, according as thou art loveable, those thou livest with will love thee ! ”

It is often so difficult to find occupation and amusement for children, that I quote the following excellent remarks of Mrs. Child, an American authoress :—

“ As soon as it is possible to convey instruction by toys, it is well to choose such as will be useful. The letters of the alphabet, on pieces of bone, are excellent for this purpose. I have known a child six years old teach a baby-brother to read merely

by playing with his ivory letters. In all that relates to developing the intellect, very young children should not be hurried or made to attend unwillingly. When they are playing with their letters, and you are at leisure, take pains to tell them the name of each one as often as they ask, but do not urge them. No matter if it takes them weeks to learn one letter ; they will not want their knowledge in a hurry. Do not try to teach a child a new word until he is perfect master of the old one : and do not try to force his attention to his letters when he is weary, fretful, and sleepy, or impatient to be doing something else. Among instructive toys may be ranked balls, arranged together so as to be counted.

“ Every step of infantile progress should be encouraged by expressions of pleasure. When a child is able to spell a new word, or count a new number, kiss him, and show delight at his improvement. Benjamin West relates that his mother kissed him eagerly when he showed her a likeness he had sketched of his baby-sister, and adds, ‘ *That kiss made me a painter !* ’

“ For children of two or three years old, pictures are great sources of amusement and instruction. Engravings of animals are very good things. It is a great object to have proportion observed ; if a child have a very small picture of an elephant, and a very large one of a mouse, it will make him think that a mouse is as large as an elephant.

“ Playthings that children make for themselves are a great deal better than those which are bought for them, and really please more. A little girl had better fashion her cups and saucers of acorns, than have a set of earthen ones supplied. A boy takes ten times more pleasure in a little wooden cart which he has pegged together, than he would in a painted and gilded carriage bought from a toy-shop. There is a peculiar satisfaction in inventing things for one’s-self. No matter if the construction be clumsy and awkward, it employs time (which is a great object in childhood), and the pleasure the invention gives is the first impulse to ingenuity and skill.

“ Cutting figures in paper is a harmless and useful amusement for those who are old enough to be trusted with scissors ; which, by the way, should always be blunt-pointed when placed in the hands of a very young child. Any glaring disproportion in the figures should be explained to a child, and he should be en-

couraged to make his little imitations as much like nature as possible.

“Drawing figures on a slate is a favourite amusement with children ; and it may prove a useful one if pains are taken to point out errors, and induce them to make correct imitations. Young people should be taught that it is not well to be careless in doing even the most trifling things.

“Dolls afford a quiet amusement ; they cause the exercise of ingenuity in cutting out garments, and neatness in sewing ; and can be played with in a variety of ways. No doubt dolls sometimes excite very strong affection. Miss Hamilton tells of a little girl who had a limb amputated at an hospital. She bore the operation with great fortitude, hugging her doll in her arms all the time. When it was completed, the surgeon playfully said, ‘Now let me cut off your doll’s leg.’ This speech produced a torrent of tears, and the little creature could hardly be pacified. She had borne her own sufferings patiently, but she could not endure that her doll should be hurt.”

In conclusion I will only say, let all teachers and trainers of the young, whether in the nursery or in the school, take heart, and be of good cheer. The blessings of success are great, even in this world ; and in another, where the teachers meet the taught—those who were taken to Jesus as “little children,” and those who waited till riper years, full of gratitude to their early guides—there will, indeed, be an “over-payment of delight.” “Behold, here I am, and the children which thou hast given me !”

CHAPTER VII.

WHAT SHALL WE DO WITH THE FOWLS, THE PIGS, THE COWS,
AND THE BEES ?

THE care of these out-door resources adds so much to the comfort and economy of a household, that every schoolmistress ought to qualify herself, not only by reading books, but by practical interest in the subjects, whenever opportunity offers, for giving information concerning them to her pupils. No woman ought to be ignorant of such important branches of Domestic Economy.

I. **Fowls.**—Domestic poultry belong to three classes of birds.

1. The *Gallinaceous* or *Rasorial* order; the first name being derived from the Latin word *gallus*, a cock, and the second from their scratching the ground for their food. Generally speaking, fowls of this class make their nests upon the ground, whence also they derive their sustenance—insects, grain, seeds, roots, and young vegetables ; in consequence they are anything but desirable inmates of a garden. The digestive organs of this class of fowls are peculiar. Immediately after being swallowed, the food goes into a large cavity before the breast-bone, called the crop or craw, where there is a fluid called the gastric juice, which moistens and softens it ; then a narrow passage admits it into the gizzard or “ grinding-mill,” where it is ground and masticated as if with teeth. Fowls are very fond of swallowing small stones and gravel, and some naturalists think that digestion is much helped by the assistance these give to the grinding process. The “ mill,” however, is so powerful, that the hardest substances are ground in it. By a cruel experiment it was found that an onyx, which is a very hard stone or gem, was diminished one-fourth in four days in a hen’s gizzard. A piece of gold money also lost sixteen grains of its weight. This

class of fowls lay many eggs, and the young are bred by incubation, or the hen sitting upon the eggs, which she does for twenty-one days ; then the young birds break the shells by tapping against them with their beaks, and come out covered with down, and in a few hours are capable of running about after their mothers in a tolerably independent state of existence. The common domestic or barn-door fowl, and the turkey, are included in the Gallinaceous group.

All fowls agree in a certain number of particulars ; they have all two legs, two wings, a bill which is composed of a substance resembling horn, and a garment of feathers, which answers the purpose of fur on other animals. The bill is a very important feature, as it serves to convey food and materials for building from place to place ; they also clean and dress their feathers with it—they use it as trowel and spade, and axe and hammer, for building their little homes, and their sword for defence against enemies. The feathers of all fowls are also of very curious and beautiful construction,—they consist of a hollow transparent tube, which connects them with the body, a long shaft springs up from it, on each side of which lie very close together a number of fibres, long on one side, and short on the other, and it is to those quills, more especially those of the goose, that “ weak-minded bird,” that we owe most of the books written by stronger-minded bipeds. The native place of the domestic fowl is supposed to be India. It receives its common name of barn-door fowl from its aptitude to build its nest in a farm-yard, and to feed upon the grain. The cock is remarkable for his *comb* and his *wattles* ; the first is an ornamental protuberance of red flesh upon the head, and the second, two hanging lumps of flesh just under the throat. It would be a good thing if most of us were as well acquainted with the cock’s voice as with his appearance, and were to imitate his early habits and cheerful greeting to the new day.

“ The cock doth crow to let you know,

That if you’re wise ’tis time to rise.”

When the Spaniards first conquered Mexico, the natives were quite astonished and frightened at the crowing of the cock, which they thought was a new language, and asked what he was talking about !

The plumage both of cocks and hens ought to be dark,—white fowls are not so healthy, and white hens are not good layers ; it

has therefore been recommended that white chickens should be fattened for eating ; their skins are better coloured and their flesh more delicate. Good fowls should have short white shining legs, and round plump bodies. Poultry-yards and poultry-houses should be in warm and sheltered localities, and dryness is peculiarly necessary for the prosperity of the gallinaceous family. The utmost cleanliness is necessary to be maintained, as fowls suffer much if kept in a dirty condition. They are not very particular as to their diet, as they eat meat cooked or raw, fish salted or fresh, all sorts of vegetables, bread and pie-crust,—but grain, snails and worms are perhaps their favourites. They should have two meals of grain given them in the day, morning and afternoon, and during the day be allowed to peck at other things as they please. The process of fattening fowls for the table takes about a fortnight, and the best food for the purpose is potatoes and grain, with dry boiled rice : bread and milk, barley or oatmeal and milk, with boiled potatoes, are all good also. The turkey belongs to this class ; it is a native of America, and was first introduced into England in 1524, it is not exactly known by whom, but it is said to have been an ancestor of Sir George Strickland, whose family crest is a “ turkey-cock in his pride.” The name of Turkey was given because it was erroneously thought to have come from that country, or, according to some authorities, because the head resembles the helmet of a Turkish soldier, which once consisted of a bluish coat of mail over his head and shoulders, with red lappets. The temper of the turkey-cock is not of the best ; like the bull, he is much excited by scarlet colours, and will often attack and injure children if they have anything of that colour about them. While regular food should be provided for turkeys morning and evening in their own shed, they may be allowed to wander about as they like, picking up food where they can, which is a great saving of expense, and renders them profitable birds even for cottagers to keep. Vetches, marrowfat peas, and pulses, though good for other fowls, injure turkeys very much. Turkey chicks are very delicate, and difficult to be reared ; damp or wet is peculiarly dangerous for them.

2. The *Columbine* or *Gyratorial* order, so called from their flying in circles. Pigeons are well-known favourites from everybody's earliest youth ; they live in pairs, and generally remain united for life. The young birds are very different from the independent chicks of the domestic fowl ; they are blind, perfectly

helpless, and are fed by the old bird, who puts its beak into theirs, and conveys nourishment from its own crop, which is at that time filled with a sort of "granulated white eurd;" in about three days some of the usual food of pigeons is added, having been previously masticated in the crop. When they are sufficiently strong, the parents drive them out of the nest to take care of themselves. Pigeons are easily kept, even in boxes with partitions and holes of access, but a dovecot or pigeon-house is the best way to rear them—any light dry airy room, with a south-west aspect, will make a good dovecot.

There are many varieties of pigeons besides the ordinary domestic ones;—the most interesting of these are the "carriers" or "horsemen," remarkable for their extraordinary powers of wing, and their attachment to their native place, so that when trained to carry messages, which they do with wonderful swiftness, they are sure to return to their homes. Since the days of the electric telegraph, however, carrier-pigeons have had a holiday.

3. The *Natatorial* or *Swimming* order, including the duck and goose. Ducks are very useful for cottagers and farmers, for their keep does not cost much; they are very good for eating, and are of great service in destroying slugs, snails, worms, and the larvæ or young of gnats and other troublesome insects. They cannot be reared without water to swim and bathe in, and duck-houses must therefore be in the vicinity of ponds, which must contain neither pike nor eels. Ducks eat almost any kind of food, but their particular dainty is boiled potatoes. Geese are the most hardy of all our birds. Thousands are kept on English commons, even more for the sake of the feathers than the flesh. They too must live in the neighbourhood of a pond or stream.

Poultry are subject to a number of diseases, and to those not accustomed to them, the list of their maladies sounds almost ludicrously like the number of "ills" our own "flesh is heir to." Apoplexy, diarrhoea, rheumatism, gout, croup, inflammation, asthma, indigestion, fever, consumption, and corns! besides the more characteristic ones of the pip or thrush, a disease of the tongue,—the gapes,—and the illness produced by moulting. When fowls are kept well fed, well housed, perfectly clean, and properly warm, they rarely become diseased.

II. Cows.—Oxen are among the most useful of our domestic

animals : the flesh forms that famous article of food, “ the roast beef of Old England ;” out of the horns are manufactured combs, knife-handles, and other things of the same kind ; the bones are extensively used as a cheap substitute for ivory ; the blood is useful in the composition of Prussian blue ; the hair is used by plasterers ; the fat in the manufacture of candles and soap ; and excellent leather is made of the tanned skin. Oxen, besides, are used in many countries instead of horses for ploughing, and are harnessed to carts and teams,—and stately and beautiful they look, although it is a strange sight to unaccustomed eyes. The wide-spread family of domestic oxen have for their ancestors the bison or wild ox, known to the Greeks and Romans. Some of these furious creatures inhabit the forests of Lithuania and the mountains of Circassia. There are some wild oxen still preserved at Chillingham Park in Northumberland, belonging to Lord Tankerville, at Chatelherault in Lanarkshire, a residence of the Duke of Hamilton, and at Taymouth in Perthshire ; they are exceedingly furious, and accidents sometimes take place if approached unguardedly.

It is that blessing of our homes, the milch cow, of which we are now going to read. There are many varieties, but the home-breds, the long-horns, and the short-horns, are among the most useful for dairies ; the Alderney and Ayrshire are excellent breeds also, but the Alderneys are not good for cottagers, for though their milk is very rich, there is little of it, and they are easily injured by wet and cold. The health of cows requires the most thorough cleanliness, and when kept in-doors, they ought to be as carefully curried and groomed as saddle horses ; rubbing down is very good for their skins, and keeps them clean. One hundred cows were kept in a large cow-house in Glasgow, the floor of which was kept regularly white-washed, and the cows as clean and sleek as a lady's lap-dog, and their health was thus so well preserved that they were as thriving as if they had been at pasture. Professor Johnston, in his Catechism of Agricultural Chemistry, states that milk is so much affected by the cow's diet, that the food must be varied according to whether the quantity or quality is preferred. If the former, she must be fed upon rich juicy grass, turnips with their tops, green rye, beans, grains, warm mashies, or other food containing much liquid, and as much whey or water to drink as she wishes for. If the best possible quality of milk be desired instead of quantity, she must be fed

on drier food,—oats, beans, bran, oil-cake, and clover-hay, along with her turnips or boiled food. If milk particularly rich in butter be wanted, the same food ought to be given as to a fattening animal,—oil-cake, barley, Indian corn, meal, and some turnips ; but if cheese is to be made of the milk,—beans, peas, vetches, and clover or clover-hay, with oil-cake, ought to be given, which makes the milk richer in curd, because they contain the almost similar substance of gluten in a very large proportion.

A great deal of occupation for the children of the family may be found in the care of a cow,—herding, cutting food, and milking,—which will be a good training for them, and be a useful accomplishment for them afterwards, whether as servants or as labourers' wives.

It is better to milk cows at the cow-house than in the field : the dairy, to which the milk is immediately carried, ought to be of a medium temperature, for if it be too hot, the milk turns sour, if too cold, butter and cheese-making will be interfered with. Counters or dressers upon which the pails of milk are placed, a cheese and butter-tub, a cheese-press for pressing the curd, and a cheese-vat, in which the curd is made to take the form of cheese, are the articles required in the dairy, and all these, especially the pails, must be kept thoroughly sweet and clean, otherwise a bad taste will be imparted to the milk and butter. The pans should be frequently boiled, and ought besides to be scalded with boiling water every time of using. After the milk has been set in pans, the cream rises to the top, and is carefully skimmed off—the milk that is left being excellent for domestic use. When sufficient cream is collected it is put into a churn, which should be warmed in cold weather with boiling water several minutes before it is used, it is then moved up and down in the churn for a shorter or longer time, in fact, it ranges from ten minutes to three or even five hours ; it is better, however, not to be less than a quarter of an hour, as, when churned too quickly, the butter is pale, soft, and poor. Butter, if left in the condition in which it is taken from the churn, will not keep at all ; the buttermilk that is in it contains milk, water, casein, sugar, and lactic acid, the latter of which causes the sourness of milk. The casein begins to putrify, and infects both the sugar and oily matter ; the proper cleansing of new-churned butter, is therefore quite necessary to its preservation. It must be freed from the buttermilk by working or kneading it

with a wooden spoon, or a very clean cool hand, to which operation many people add that of washing, though others maintain that this is injurious to the butter.

In winter, cows are fed largely upon turnips and cabbages, which give a very unpleasant flavour to the butter: it is said, I know not with what truth, that this never takes place with Swedish turnips, and early York cabbages. A little nitre (saltpetre) put into the milking-pail, before the cow is milked, prevents the flavour of the turnip in the milk or butter.¹

To preserve butter for winter use, dry some salt before the fire, and roll it with a glass bottle till it is as fine as possible; spread a layer of salt at the bottom of a jar, then press and beat the butter down with a hard wooden rammer, strew the top with a thick layer of salt, so that when turned to brine it may entirely cover the butter; the best jars for this purpose are the Nottingham stoneware with lids.

In making cheese, it is necessary that the milk should be curdled, that is, that it should be separated into two parts,—the casein coagulated into an insoluble mass,—and the whey or fluid part. When milk is left to itself, it sours and eurdles in a shorter or longer time, but in cheese-making this is produced artificially, by various means used in different countries—lemon juice, vinegar, cream of tartar, or almost any kind of acid is available for the purpose, but rennet is the great agent used in this country for coagulating milk; it is the dried and salted stomach of the unweaned calf, lamb, or pig; if a small piece of it be soaked in water for a time, and the infusion mixed with warmed milk (at a temperature of 90° or 95°), curdling shortly takes place. It is said that rennet ought not to be used till it is ten or twelve months old, and that it is the decay of a portion of the membrane, rendered soluble in water, which acts upon the sugar of milk, changing it to lactic acid, and thus producing curdling or coagulation. The curd becomes solid, and must be slit in various directions with a knife, for the purpose of allowing the whey to separate itself, which must be skimmed off as it arises; the curd is then put into a sieve, if possible, without being broken, where it is gently pressed, to separate from it the remaining whey. It is then cut up into small pieces, thoroughly salted, put into a cheese-vat or mould full of holes, both at the bottom and sides, and

¹ See Appendix A.

pressed heavily ; it is placed between cloths, which should be changed every time the pressure is suspended, and this should be done after it has been applied for three hours. It should be continued again after the interval of some hours, till every drop of milk is extracted. The cheese is then made, and it only requires to have salt sprinkled over it, and to be kept in a dry, clean, warm place till fit for the market. New cheese is not good, except that made from cream alone, and it requires time to ripen its peculiar flavour, a slow fermentation taking place within, which is much affected by temperature, a low equable one being requisite. In France, especially at Roquefort, there are subterranean caverns for the purpose of keeping and maturing cheese, where the temperature is maintained at 41° to 42° .

It is said that a very good cheese is made from potatoes in Thuringia and in some parts of Saxony. "After having collected a quantity of potatoes of good quality, giving the preference to the white kind, they are boiled in a caldron, and after becoming cool, they are peeled and reduced to a pulp, either by means of a grate or mortar. To five pounds of this pulp, which ought to be as equal as possible, is added a pound of sour milk, and the necessary quantity of salt. The whole is kneaded together, and the mixture covered up, and allowed to lie three or four days, according to the season. At the end of this time it is kneaded anew, and the cheeses are placed in little baskets, where the superfluous moisture is allowed to escape. They are then allowed to dry in the shade, and placed in layers in large pots or vessels, where they must remain for fifteen days. The older these cheeses are, the more their qualities improve. Three kinds of them are made. The first, which is the most common, is made according to the proportions above indicated ; the second, with four parts of potatoes, and two parts of curdled milk ; the third, with two parts of potatoes, and four parts of cow or ewe milk. These cheeses have this advantage over every other kind, that they do not engender worms, and keep fresh for a great number of years, provided they are placed in a dry situation, and in well-closed vessels."

III. The Pig.—This animal, though uninteresting and ungainly in appearance, has been called "the poor man's friend," and well he may be, for he is a great help to domestic economy ; salt pork and bacon being a most valuable addition to cottage

cooking—while he is easily fed, and easily satisfied with the refuse of the kitchen, and the produce of the garden. Pigs are particularly fond of the remains of the lettuce crop. It is a mistake, however, to think that they require no attention to their health and comfort ; their food ought to be boiled well, to have salt added to it in moderate quantities, with occasionally a little sulphur or nitre in the morning ; they must be fed at regular intervals, having just what they require and no more, so that none be left in the trough. Their diet ought to be varied ;—when cheese is being made, whey is an excellent food for them. The pig is a calumniated animal in one respect ; it has long been currently reported and believed, that he likes to be dirty. Now, though he has not sufficient strength of mind to enter a protest against dirt, and, unfortunately, thrives pretty well in it (witness his flourishing condition in Irish cabins), yet it is now a recognised fact among pig authorities, that he is a far happier and better member of society, when his court, sty, bed, and feeding-trough are kept perfectly clean and dry ; it has even been found that bathing and rubbing his skin frequently are very important for his health and happiness.

IV. **Bees.**—Keeping these wonderful and industrious creatures, would be found very useful and profitable to the cottager with a garden of his own, or living in the vicinity of gardens and pleasure-grounds : much money may be made by the sale of wax and honey ; and it is stated as a fact, that orchards and gardens are much more valuable where bees are kept, for they carry particles of the farina from flower to flower, and from tree to tree, thus rendering them more fruitful. Orchards have been known to produce double the crop after bees were kept than ever they did before, hence, it has been said, that “if there were no bees, there would be no apples.”¹ The interesting history of that simple straw-covered dwelling, which is at once the home and the kingdom of the bee, is most remarkable and interesting ; indeed, its marvels would almost exceed belief, if we did not know that all the works of the Lord are full of marvellous beauty and goodness, far past our finding out, or understanding. I shall very briefly allude to them, in hopes of leading you to read and study them for yourselves.

There are three kinds of bees ; the queen, the drones, and the workers. The queen-bee is the only bee in the community which

¹ See *Finchley Manual*. Domestic Fowls and Animals.

has a family, but hers is a pretty large one, as she lays many thousand eggs. Most of the other bees are differently formed, and are the workers of the hive ; they are divided into two classes, the wax-workers and nurses. Previous to the queen's possession of the supreme authority she commits many murders. You must know that there is a royal nursery, in which the larvæ of several bees are carefully watched and fed by the "nurses." The first of these royal infants that arrives at her winged maturity becomes the queen-bee, and in case of the others becoming her rivals, the first thing she does is to rush to the nursery, and kill all the royal infants ! She does this by stinging them to death, and it is an extraordinary fact, that these murders have been provided for in the formation of these little creatures ; all bees in their larva state, spin for themselves a silken covering or cocoon, which covers the whole body, and is of so close a texture, that no sting could penetrate it, and it is only the cocoons of the royal larvæ which are made in a different manner, leaving part of the body uncovered, as if on purpose to admit the murderous sting. The whole community pay the most devoted and respectful attention to the queen ; she is constantly surrounded with a circle of bees, and followed by a guard ; others press through the throng of courtiers, bringing her offerings of honey, and touching her respectfully with their antennæ (the two little horns or feelers which you may see on their heads), while they all vibrate their wings, and buzz gently to express their affection and respect. After the death of a queen they pay her dead body as much respect as when alive, and sometimes are a considerable time of transferring their loyal affection to another sovereign. Affection, however, as I said before, is not the only feeling which appears to exist in bee-hives ; the females hate each other, and the workers hate the drones or idle bees, which, though the fathers of the young bees, are not of any further use, and are indignantly expelled from the hive, and frequently stung to death. Bees have many enemies, and none worse than moths, which attempt to invade them by night, but find a prepared foe to encounter : sentinels parade before the hives by moonlight, while within there are barricades and ramparts, and fortified gates. And they do this in little companies, thus creating a draught capable of moving pieces of light paper or cotton suspended by threads. They also display the greatest care and diligence in keeping their lives clear from anything which would make the

air unwholesome. The dead bodies of insects they instantly cast out ; or if too large to be removed, like some luckless snail which may have intruded, and lost its life in consequence of its temerity, they immediately seal up the shell with a stuff called propolis, a substance formed by bees out of the brown resin of trees which they have devoured ; this keeps the decaying matter within from being in the least offensive. If the snail is shell-less, they embalm the whole body in propolis, which answers the same purpose. Propolis they also use in painting and varnishing those beautifully formed six-sided cells which are so much admired, especially when well filled with honey. They also use it mixed with some old wax instead of mortar, to make the little cells stronger and firmer. Farina or pollen is the pretty yellow dust of flowers which bees collect and bring home, stored in little pellets upon their legs : mixed with honey, it forms, after being swallowed by the bees, what is called bee-bread, and is the principal food of the infant bees. Wax is principally formed out of honey, and exudes from their bodies, forming white scales ; it is only working-bees whose bodies are so formed as to permit of this. Honey itself is gathered by the “busy bees” from almost every flower, and is then disgorged into the cells prepared for it, as pure as when taken from the flower.

When the hive is overstocked, which is certain to be the case, the bees “swarm ;” that is, a young queen is chosen, who goes out first, and generally alights upon the first green branch she comes to. The bees collect in a heap around her, hanging to each other by means of their feet ; an empty hive sprinkled with honey and ale, and a box containing a store of old honey for their food, must be placed under them, and a sharp blow given to the branch, which will make them all fall into it.

The best hive for the cottager is “Milton’s improved cottage straw hive.” It should be placed upon a stool standing in a thatched shed open towards the south ; if ants are found in the neighbourhood, rings of green twigs covered with tar should be put round the legs on the ground, which the ants will not cross. Water should be placed near the hives in shallow dishes, the bottoms of which should be covered with pebbles, and the water should just come to their tops, so that the bee can drink without any danger of falling in. The following is a list of some of the flowers and plants which are the best to cultivate in the neighbourhood of bees :—Crocuses, daffodils, heaths, lilies, laurustims, marigolds,

mignonette, primroses, sun-flowers, roses, violets, wall-flower, any kind of fruit-trees, cauliflower, mustard, parsley, parsnips, pease, sage, thyme, broom, borage, and furze or gorse. The old cruel method of suffocating bees is rarely employed now ; there are two ways of obtaining the honey, without destroying the industrious little makers of it. It is done by "driving," that is, turning all the bees from the old hive into a new one, then the honey is taken away, the hive thoroughly cleaned, and placed upon the temporary one which is reversed ; in the course of a few hours the bees will all return to their old abode. The other method is by fannigation : the fumes of burning saltpetre and other substances are blown by the use of bellows into the hive ; the bees are thus intoxicated, and fall down as if they were dead, but they soon revive after the abstraction of their property, and commence the labours of life anew. The proper time for thus securing the honey is in August and September. From the last week of November till the end of February, bees require to be sheltered and fed. The best place for them is a dry, cold, dark room, or the front of their shed may be boarded up. The proper food of bees is a pint of ale to a pound of sugar, and about half an ounce of salt, the whole boiled together and skimmed ; when cold it will have the consistency of honey.

There is a great deal of health and happiness to be found in the cultivation of a garden, and it is one of the luxuries of life which few of those who live in the country need be debarred from. As it lies peculiarly within the province of woman, I shall say a few words upon the subject. The moral benefits of gardening are great : the occupation which God provided for the unfallen dwellers in paradise seems still to retain some of the characteristics which made it fit for such a scene. It is full of brightness and beauty, leading the thoughts every moment up to Him who has made such wonderful provision for the smallest petals and the tenderest branches. It shows the exceeding care and thoughtfulness of that great Creator, who gave so much for our mere pleasure and recreation :

" God might have made the earth bring forth
Enough for great and small,
The oak-tree and the cedar-tree,
Without a flower at all."

It teaches many lessons in the time of trouble and depression ;—the return of the flowers in their season, their sustenance and

support in darksome as well as in lightsome weather, the wonderful arrangement by which "all things" are made "to work together for their good,"—sun, rain, wind, cold, and heat, will all

" Whisper to the heart of man,
When faith and hope are din,
That He who careth for the flowers,
Will much more care for him."

The physical benefits are not less, for those who are confined within walls during the day : the early mornings and the evenings spent in the garden with the pure air, and the exercise, and the smell of the fresh earth and flowers, will bring stores of health and strength ; while even for labouring men, the change of employment, and the pleasant excitement of watching, planning, and hoping, will make the evening work in the garden a rest instead of an additional labour. It will also keep them from the public-house, whither many are driven from no worse motive than idleness, and want of pleasant evening occupation. Women cannot do the whole work of a garden themselves, but they may plan and arrange, and by kind, gentle words, may persuade their husbands to do the hard work at first, which will soon lead them to take an interest in it for themselves. The children of the family, too, may be kept out of harm's way by finding constant occupation and amusement in the garden ; the youngest may be taught to help in weeding, watering the flowers, picking up stones, and carrying away little loads of rubbish. The economical benefits of a garden are great : without it a pig cannot be kept ; at least it cannot be properly fed and fattened without great extra expense. It supplies the family with vegetables, besides often giving some for sale ; the fruit will do for puddings, and dumplings, and preserves,—the latter of which, when sugar is cheap, is often an economical substitute for butter.

No garden ought to be allowed to degenerate solely into a kitchen-garden. The wife and children ought to keep several plots, or a sunny border close to the door, for flowers. Among the many flowers which a cottager may easily cultivate, are China roses, jessamine—both of which look beautiful when trained over the cottage windows or porch—wall-flowers, stocks, honeysuckle, peony-roses, pinks, polyanthus, crocuses, snowdrops, sweet-peas, and mignonette. The fuchsia also is a lovely flower, with its pendant crimson blossoms, and their rich purple folds within.

For a long time it was supposed to be a very tender plant. It is said that it was brought to this country, from some far-away clime, by a sailor, as a present to his wife. She was offered large sums for it, but she would not sell it from love to her sailor. However, I suppose that in process of time she gave little cuttings of it, for since then it has become very common, and is found to be a very hardy and easily cultivated plant ; it stands out all the winter, and grows easily from cuttings, which strike best in June. The sun-flower is a magnificent plant, but it is not generally known that it is as useful as it is handsome. I have read that the seeds are very good for fattening poultry, and increasing the number of their eggs, and for this purpose they have only to be cut off when ripe, tied in bunches, and hung up in a dry place. Where a great many are cultivated, they are very good food for sheep, pigs, and pheasants. The dried leaves form a good powder for cattle, and the dry stalks burn well, while the flower is a great favourite of bees. No cottage garden ought to be without nasturtiums, with their brilliant yellow flowers of varied shades, and their useful seeds, which form an excellent pickle. I have already mentioned, in a former chapter, many of the kinds of vegetables proper for cottage gardens, and for all other information I would refer you to Sir Joseph Paxton's admirable little book called *The Cottage Calendar of Garden Operations* ; as it only costs 3d., it is accessible to all.

Before concluding this chapter, I must give you a short account of a substance which has been mentioned as entering into the food of various domestic animals, and as being necessary for preserving their flesh and other articles of food prepared from their products. I refer to salt, a condiment used far more extensively, and of more essential importance, than any of the other condiments mentioned elsewhere, under the head of seasoning vegetables or spices. Common salt is composed of two elements,—one a yellowish green, suffocating, poisonous gas called *chlorine*, and the other a bright silvery-looking metal called *sodium* ; and the name which chemists give it is chloride of sodium. Salt is procured in two ways. First, it is found in magnificent, solid, under-ground masses, called rock-salt, in many parts of Europe, Asia, and America. The mines of Poland are peculiarly fine ; the rocks of salt are pure and transparent ; chapels are cut out of them, and the whole scene is glitteringly beautiful as fairy-land. All salt mines are

not so attractive however, as the salt is often of thick and dingy hues. The rocks are quarried, and the blocks sold under the name of rock-salt. There are extensive mines in England, principally in Cheshire, and also in Worcestershire, where the rocks are of a red colour, and very impure ; they are therefore not quarried extensively, as the salt would require so much purification for domestic use by being dissolved, and then formed anew into pure crystals by evaporation, that the double process would be too expensive. Instead of quarrying, shafts are bored into the beds of salt, and water poured down, which becomes saturated with salt, and is then pumped up again and crystallized by evaporation. There are also springs of brine which proceed from these mines, and are of course highly saturated. Some of the beds of salt are so thick, that they have not yet been bored through, though mined for centuries. The workhouses where salt is made are called *wych-houses* ; and it is supposed that *wych* must be an old English word for salt, as the names of all the principal towns where salt is made end thus,—Droitwich, Northwich, Hamptwich, &c. &c.

Rock-salt has other uses than to be eaten with food ; prisms, those beautiful instruments which separate by refraction the wonderful colours that compose white light, and lenses through which we see the minute wonders of the microscopic world, or the stupendous glories revealed by the telescope, are much prized when made of this material, colourless and perfectly pure ; from some causes not yet quite understood they transmit certain rays of light that cannot pass so freely through glass, and enormous prices are given for them.

The second process is by the evaporation of sea-water. This often takes place spontaneously, and the crystals then left behind are known by the name of bay-salt. There is a singular plain in India called the Runn of Cutch, which is 7000 square miles in extent ; it is a sort of “debateable country,” for it is neither land nor sea ! It is dry during a part of the year, but it is covered by salt water during the monsoons or periodical winds in the Indian Sea. No grass grows on it, but it is encrusted in many places with layers of salt left by the natural evaporation of the sea-water. In Ethiopia, there is a salt lake which, being fed by no rivers, and exposed to the unveiled rays of a tropical sun, has shrunk into a basin of several miles in extent. It is half filled with the deepest blue smooth water, and half with a solid sheet of

glittering snow-white salt, left by evaporation.¹ Salt is generally procured from sea-water, however, by artificial evaporation by means of heat. It is boiled in vessels which are never allowed to dry, fresh supplies of sea-water being constantly poured in. There are many other things contained in sea-water than the salt which forms the crystals used for domestic purposes, and a considerable refuse called "bittern" remains; sulphate of lime is produced early in the process of evaporation, and afterwards magnesia and epsom salts. The natural brine or solution of rock-salt described above, is, therefore, much stronger than sea-water, which contains so many other ingredients, and is, of course, more economical, as it does not cost so much fuel in the process of evaporation. It is a curious fact that salt does not dissolve more completely in hot water than in cold, though it dissolves more quickly: hot pickle is not stronger than cold pickle.

Salt is the great antiseptic, or preservative against corruption and decay. Christians are therefore called in the Bible, "the salt of the earth," and warned not to lose their salutary effect on society, by the example of salt, which, when it loses its flavour, is of no other use than to be cast out and trodden under foot of men. The ancient laws of Holland "ordained man to be kept on bread alone, *unmixed with salt*, as the severest punishment that could be inflicted on them in their moist climate; the effect was horrible; those wretched criminals are said to have been devoured by worms engendered in their own stomachs."² This substance is, indeed, so necessary to the life of human beings that they partake of it unconsciously in various ways. Almost all vegetables contain a proportion of salt, and therefore it is necessarily also an ingredient in animal food. It is found in the air, "for salty particles are carried by the winds from the stormy ocean, and mingled with the universal atmosphere."³ It is also found in the blood and other fluids, even in the tears of human beings. It is necessary, however, for health that salt also be mixed with food, although it is said that the Otaheitans eat no salt. Dr. Livingstone mentions in his interesting book of travels, that the Bakwains, an African tribe, suffer much from want of this commodity. There is none in the district, and therefore it is only a luxury for the rich who

¹ See Sir Charles Lyell's *Manual of Elementary Geology*.

² Quoted in Youman's *Handbook of Household Science*.

³ Professor Johnston.

can afford to buy it ; the poor, who cannot do so, are afflicted with indigestion, which Dr. Livingstone found was cured by a spoonful of salt. It was eagerly sought after by the natives, who considered it a delicacy as well as a medicine. Salt, however, is poisonous when used in excess, and brings on many maladies ; the constant use of salt meat produces scurvy, that awful disease which makes such sad havoc on board ships bound on long sea voyages. I have heard of a case of frightful earbuneles, which the medical men at last pronounced to be caused in great part by the over use of salt, and the cure did not progress till the quantity was restricted to a very small portion at each meal.

Soda is the basis of common salt, and is also extensively used in the manufacture of the very dissimilar substances of glass and soap ; it is procured from the ashes of sea-weed. I read an interesting account the other day of the Barilla collectors, who gather it on the archipelago of Chausey, on the coast of Normandy ; they collect the wrack or sea-weed, spread it on the sands to dry, then rake it together in heaps, set fire to it, and the ashes form soda, which is sold under the name of barilla. The red light of the burning sea-wrack by night, and the columns of smoke by day, are exceedingly picturesque, but the odour of the smoke is highly unpleasant, though not unwholesome.

CHAPTER VIII.

WHAT SHALL WE DO WITH THE PURSE?

I HAVE stated before, that the beautiful word "Economy" has a much wider meaning than that which it is generally understood to signify. Nevertheless, domestic economy hinges to a considerable degree on the proper management of pounds, shillings, and pence. All your other instructions to your pupils will be of little use if you have not also impressed upon their minds the importance of a due regulation of domestic expenditure, and given them some practical lessons as to how they should keep the purse.

It is impossible to lay down any settled rules upon the subject, because wages are subject to many fluctuations, according to the causes which affect the price of labour; fuel, that important item of expenditure, varies with the locality; the prices of provisions are constantly rising and falling; and rent is so different in town and country, that the excellent rule that house rent should never exceed one-eighth of the income, cannot always be observed, though it should ever be borne in mind. Each person, therefore, must draw up an estimate of expenses for himself, or rather I should say "herself,"—for a woman, if educated in a national school, *ought* to possess sufficient sense and knowledge to enable her to take this duty off her hard-working husband. Three excellent rules were given by a Nottingham gentleman,¹ who had himself risen from the ranks of labouring men; he said that any one intending to improve his condition, must earn all he can, spend as little as he can, and endeavour to make what he does spend produce as many real comforts and enjoyments as possible. A housewife must remember that important sentence "intending to improve his condition;" a rare thought and

¹ See Tegetmeier's *Domestic Economy*, p. 103.

intention, alas ! for generally it seems to be the only consideration how a family can be made to scramble through existence " anyhow,"—instead of a steady planning, and resolving to reach on to higher stages of comfort and respectability. This does not imply discontent or ambition, but on the contrary, a simple belief and gratitude for the blessings promised to " the diligent." Every step onward that is taken by parents, will tend to place their children in a position in after life, wherein they can not only obtain more good for themselves, but also do more good to others.

A working man's income ought first to have the rent deducted, and then a calculation made of the exact weekly expenses, which ought to be rigidly kept to, as far as possible. As many small unexpected expenses are apt to occur, care should be taken that in the estimate a small sum be set apart every week to meet these emergencies ; when none occur, it can be carried forward to the next. I may remark that there are few cases where at least a " mite" may not be set apart for the service of Him who gives or withholds the silver and the gold. When this can be done, it is a great comfort to have it thus appropriated beforehand, as then no scruples nor grudges need occur when a case of charity presents itself. " Honour the Lord with thy substance," is not said to the rich alone ; and it is wonderful how much even the poor can do when the wish is in the heart, without having recourse to the species of charity commemorated in one of Sir Walter Scott's novels, where a man orders his wife to " keep the bannocks for the poor that the bairns winna eat !" The Spanish proverb, " Let that which is lost be for God," is a still more severe sarcasm upon the charity which costs us neither money nor self-denial. The story on which the proverb was founded is, that the father of a family made his will, and disposed of a cow which had been long lost, in this way,—“ if found, it was to be for his children ; if still lost, for God !”¹

It is of great importance that all expenditure be properly proportioned : not too much for bread and meat, and too little for clothes ; not an extravagant quantity of groceries, while schooling is forgotten, or fuel scantily supplied. " Practice will make perfect" in this as in every other kind of knowledge ; the failures of one week, or of one year, teaching more to the really thoughtful and

¹ See Trench's *Lessons in Proverbs*.

persevering, than pages of other people's experience. It is essential that regular accounts be kept, and it will devolve upon you to teach your pupils to do this in an orderly business-like way, and in writing that can be read. The daily expenses should be marked down on a small bit of slate, and entered every Saturday in an account-book—the expenditure and receipts being placed on opposite pages.

If you wish to keep your pupils and those depending on them from plunging into a sea of difficulties, dangers, and temptations, you will warn them against running into debt, or “scoring,” which is the preparatory step to it. Getting things upon credit is so much easier than paying ready money, that it is generally advocated by the wives; it saves the conscience a great deal of trouble too, for small pieces of extravagance that can be indulged in by just putting a “few pence” down to a bill, are seen in their true light when they have to be paid for out of the money actually in their purse. Then it is less trouble to go on, not knowing what is got, for six months or a year, than watching and calculating, and checking the expenditure of every week; but in this slovenly way all control over weight, measure, and quantity is lost,—while you do not get such good articles as when you are known to be able to pay for them in ready money. You are, moreover, a prey to uneasiness and uncertainty till the bills come in, not to speak of the angry words of the husband—the stinting of the household to get them paid, and the just reproaches of those to whom the payment is long delayed. Every one should try to get beforehand, so as to have their wages in hand for their daily expenditure, instead of being obliged to part with it all, as soon as it is earned, to satisfy the demands of the past week, or month, or quarter, and then obliged to run a score again. This would be difficult at first, but a little determined self-denial would soon effect it, and would be amply repaid by the future comfort and independence. It is also of great importance not to be always rushing to the shop to buy small quantities of groceries, &c.; it is a waste of time and of money. The retailer takes larger profit, and the *turn of the scale* is more in his favour. A pound of bad tea, retailed in ounces and half ounces, will come to thirty per cent. more than a pound of really good tea bought at once. It is most extravagant to buy little bits of soap, for it is an article which improves and hardens by keeping, and much of it is wasted by being used when newly purchased.

You must never weary of inculcating the apparently easy but reluctantly learned lesson that nothing is too small to be of consequence and to cost consideration : that no gain is insignificant ; and no loss guiltless. It was said of a great painter, “ that he became great by neglecting nothing ;” teach your pupils that if they wish to become great as Christian housekeepers and economists, it must be by doing likewise, and “ neglecting nothing.” The housewife who acts in this spirit, will not throw away bits of cotton, silk thread, or worsted ; she will remember “ that if we keep a thing seven years, it will be sure to come to a use at last,” and an excellent plan it is to have a drawer or box entirely for odds and ends of this kind. She will not turn up her nose when advised to save all the little pieces of soap which would be broken to bits, or thrown away in the basin if not attended to : she will gladly tie them up in a morsel of linen or muslin, and coil them into a ball which she will put into a cool dry place till it is again fit for use. She will not be affronted at being told that she is extravagant when she keeps candles in a warm place instead of a cool one, thus allowing them to melt. She will not think it worthless to keep a strict eye even upon the unnecessary throwing away of needles and pins, for the seldomer boxes of pins and papers of needles require to be bought the better ; and she will be quite delighted to know that as much carbonate of soda (not the soda used for washing, but the fine sort bought of the chemist) as will lie on a fourpenny piece, put into the teapot with two tea-spoonfuls of tea, and the usual quantity of water, will make it as strong as three tea-spoonfuls without it ; she will be the more *intelligently* pleased if she has previously been taught to understand the *reason* of this fact, which you may remember was mentioned in another chapter.

If men add more expense to the household in the shape of meat, beer, and tobacco, women take far more than their share out of the purse, by that most vexatious mode of diminishing money—miscellaneous expenditure. They are perhaps “ pound-wise,” and grudge their children schooling, and are always grumbling at having to buy so much beef and mutton, and won’t call in a doctor till probably it is too late, and go about in ragged gowns and dirty bonnets, and heel-less shoes, to show their “ thrift.” At the very same time they are “ penny-foolish ;” and even with the restraint of ready money, cannot deny themselves the grand piece of cheap

cotton lace at the door, for which there is no manner of use ; or the very unnecessary bag of “sweeties” for Johnnie, or the hideous shepherdess for the chimney-piece, or the “bargains” at selling-off shops, or anything else that secures the pleasure and consequence of putting the hand into the pocket or purse and subtracting very small sums, it is true, but which, when added together at the end of the year, amount to almost incredible figures—money absolutely thrown away ; not one atom of comfort or respectability, or even amusement gained. Let every woman beware of herself in this particular ; let her ask herself distinctly and honestly the question, “Do I require this ? Can I not possibly do without it ?” And let her be prepared to abide by the answer, especially when it is something for her own gratification only ; and never let her hearken to the little pettish voice of her temper—“Dear me, what a fuss about a trifle !”

I shall copy for you here some tables of expenditure ; the first imaginary, the two more minute ones are real. Of course they cannot in any way be considered infallible guides, they must be modified by circumstances, and you will probably see many deficiencies which you could lead your pupils to find out for themselves. If you turn your attention earnestly to those things, most of you would correct such accounts by the experience of your own homes, or by what you observe in the homes of others :—

“We will imagine that your husband earns twelve shillings per week ; now out of that you might lay by ninepence or a shilling every Saturday ; for to save, if it be ever so small a sum, is a most important thing to do. Of course the rent, food, and firing, must be secured. These we will reckon—

	s.	d.
Rent, ...	2	0
Food, ...	5	0
School, ...	0	6
Firing, ...	2	0

Out of this you have two and sixpence left ; you might therefore put away a shilling, and you would have one-and-sixpence for any extra necessity which might occur in the week. If you have no children, or none big enough for school, you would have three shillings over your expenses, and could, therefore, put away one shilling and sixpence. If you were to persevere in putting away only one shilling, at the end of a year you would have £2, 12s., which would be most useful in case of sickness, and if no such misfortune occurred, it would be useful to purchase some articles of clothing or household goods to add to your comfort.”¹

¹ *Thrift, or Hints for Cottage Housekeeping*, by the author of *A Trap to catch a Sun-beam*.

Weekly expenditure for a brickmaker's family of six persons.

" It is with pleasure that I give you my advice how to manage a family as working-people. My way of living cheap is to live one day as we can live another; the children to have sufficient of good bread at proper meals, not to be eating at any other time. I give them coffee or tea, or milk twice a day; and for dinner, some days we have potatoes pared and cut into a dish, with pepper and salt or onion, or a few slices of bacon on the top—sometimes a little mutton. About once a week we have a suet pudding, and a piece of mutton roasted; and the next day a boiled pudding, and the meat that remained the day before; sometimes a pig or sheep's fry stewed with onions and sage, pepper and salt. We buy our groceries in good quantities, which we find to be much cheaper than going to the shops by the week :—

	£	s.	d.
Flour, 3½ stone at 2s. 6d.	0	8	9
Beef or mutton, 4 lbs.,	0	2	0
3 lbs. of bacon, with feeding our own, 6d. per lb.,	0	1	6
½ lb. butter, 1s. 4d. per lb.,	0	0	8
1 lb. sugar at 6d.,	0	0	6
Coffee,	0	0	3
Tea,	0	0	6
Milk,	0	0	10½
Candles,	0	0	6½
Treacle,	0	0	6
Soap, soda, blue, starch,	0	0	6
Oatmeal and little articles,	0	0	6
Fire,	0	1	6
Schooling, four children,	0	0	8
Rent,	0	4	6
Clothing, with shoes,	0	4	0
	£1	7	8½

Carpenter.—Wife and three children, earns from thirty to thirty-five shillings per week; always in work; lost no time for years, only holidays :—

" *Week ending February 23d.*

	£	s.	d.
9 lbs. brisket of beef, at 5d.,	0	3	9
Potatoes, 5d., greens, 3d., turnips, 2½d.,	0	0	10½
8 quarters bread, at 9d.,	0	5	11½
Milk, 4½d., sugar, 5d., tea, 1s. 2d.,	0	1	11½
Beer,	0	1	3½
Flour,	0	0	9½
Suet,	0	0	4
Schooling,	0	0	6
Lodging,	0	5	3
Coals,	0	1	4
Breast of mutton in week,	0	0	11
Pepper, ½d., salt, 1d., soda, 1d., soap, 5d., vinegar, 1d.,	0	0	8½
Tools, average,	0	1	6
Clothing averages, including shoes, hats, &c.,	0	4	6
	£1	9	8

Remarks.—Sometimes the beer might be a little more, perhaps 1s. some weeks, or we might have half-a-pint of gin occasionally ; and periodicals average 3d.

In summer-time we have an excursion or two by rail, that costs us in the course of the summer about 30s.

This is a fair average, seldom much over or under. The clothes quite as much per annum ; coals and a few things might be less ; but then other extras come in.

This is a very steady, respectable mechanic, and a very fair sample of mechanics in general."¹

There are two things that are always picking and stealing away at the purse like long restless fingers, and which as effectually both diminish the contents, and prevent more supplies from pouring in, as the most extravagant dinners and dresses. I mean idleness and waste of time.

1. *Idleness.*—A common proverb says that "Sloth is the key of poverty," while in the words of Solomon the king, we find that "He also that is slothful in his work, is brother to him that is a great waster. Slothfulness casteth into a deep sleep, and an idle soul shall suffer hunger. The sluggard will not plough by reason of the cold, therefore shall he beg in harvest, and have nothing. How long wilt thou sleep, O sluggard ? When wilt thou arise out of thy sleep ? Yet a little sleep, a little slumber, a little folding of the hands to sleep ; so shall thy poverty come as one that travelleth, and thy want as an armed man." There once lived a man named Nicholas Horn, who, out of the fifty-nine years he lived by the world, spent forty years in his bed ! In his will he left instructions that on his tombstone should be recorded all his useful actions ; there was engraved this fact, that there was a day when Nicholas Horn died ! I am afraid that there are more Nicholas Horns in the world than people think ; certainly a great many who would be so if they dared. Idleness, we are told, was a crime by the laws of the ancient Peruvians, and as such severely punished. Occupation was expected from all, and provided for all, from the child of five years to the aged matron.² No wonder the old Peruvian purses were well filled ; and I think it is highly probable that the Peruvian consciences, and the Peruvian tempers, not to speak of the Peruvian floors and dinners, were, in consequence of this constant diligent occupation, in a

¹ These two tables of expenditure are taken from Miss Burdett Coutts' excellent volume, pp. 26, 196.

² Prescott's *History of the Conquest of Peru*.

much more flourishing condition than many consciences, tempers, floors, and dinners in our modern days. Would that some English statesman would revive that good old law ! Late rising is a very common help on to poverty in cottage homes. The wife, and of course the children, lie in bed long after the poor intended husband is off to his work, and no wonder that, having lost an hour in the morning, as some one has said, they are obliged to spend the rest of the day in hunting for it. It is a very desirable thing that the wife should do something to increase the funds of the household. With the many necessary demands upon her time, she cannot do this unless she cuts off all the unnecessary ones—the long morning sleep, the gossiping with the neighbours, and such like. If she exercises this sort of self-denial and economy, she may be able to earn three or four shillings a week by her needle. This is always the best kind of extra employment for women, as it does not take them away from their homes and families ; even if they gain more by working in the fields, or by charring, it is a question whether there is any real gain when counterbalanced by the loss of personal superintendence and economy at home. The children ought to be trained to earn something very early, by herding cows, running messages, or any other light occupation that presents itself.

2. *Waste of time.*—Economy of that precious gift which is drifting away from each of us into its native home of eternity, ought to be the object of earnest endeavour to all who are anxious to use properly what remains of it. It was said of George Stephenson, the great railway engineer, a man of almost unparalleled industry and rewarded perseverance, that “the secret of his success in life was his careful improvement of time, which is the rock out of which fortunes are carved, and great characters formed.” Even the stray bits and odd corners of this precious material are so valuable, that they have been called by a poet, “The gold dust of time.” How much need then for the housewife of every station to be thus a good economist, for though neither railway engineer nor poet, she has proportionably as much depending on her individual exertion as either the one or the other ! How important for you, my dear friends, who are to be the teachers, to learn first how to practise this species of economy yourselves !

To give you some idea of the state of things from which you are to save your pupils, I shall conclude this chapter with the

following graphic account of the household discomforts and distresses caused by the want of due regulation of time, that important item in domestic "expenditure."

"By way of example, I will describe a day in the life of a labouring man's wife, who is not an ill-disposed person, who is not idle, but whom want of forethought, and want of good management render a bad wife. Her family consists of her husband, herself, her husband's mother, and two children. The old woman is too old to be able to work, and the two children are too young to be of any assistance, therefore all the labour falls on the wife. She is a good needlewoman, and being anxious to add to her husband's income, she takes in plain needlework. She had promised to send home to her employer some work early on the day I am going to describe. In order to get it finished, she sat up late the night before, and was consequently so tired that she lay in bed next morning an hour longer than she ought to have done. Though she did not rise early, her duties did, and when night came she had not yet overtaken them. This need not have happened if she had gone to bed in proper time the night before. But she squandered quite enough of time during the day to have enabled her to get the work done without incurring the double loss of necessary rest and costly candles. Her husband was obliged to go to his work, so he went, poor man, leaving her in bed. When she got up, she lighted the fire and put things in proper order enough, washed and dressed the children, and attended to the old woman carefully and kindly. When they had all breakfasted, she remembered that the needlework had to be taken to its destination, and regretted that she had forgotten to ask her husband to take it on his way to his work, as he had to pass the house of her employer. She had promised faithfully that the work should be sent home at eleven in the morning. It is now eleven o'clock, and the house is more than a mile distant. She hurries off with the work, taking the baby in her arms, and, by good luck, finds that she is in time, only this being a Friday morning the lady has gone to church, and has left orders that she is to wait to be paid. She is of an easy temper, so she waits willingly enough, and any little uneasiness she feels about her husband's dinner, she soothes by hoping his mother will get something ready for him. She returns home about one o'clock, finds her husband has been and is gone again ; that he helped himself to some bread and cheese,

and grumbled because the fire was out. She had neglected to make it up before going out, although she intended to do so, and to set the kettle on, as she has got a bit of washing to do. The old mother, who is a gossiping body, had stepped over to a neighbour's soon after her daughter went out, and had taken the elder child with her. So the wife hears of her husband's grumbling from the next-door neighbour. In spite of her easy temper, she begins to think herself rather ill-used, and expresses an opinion that she is always slaving (which in truth she always is) and gets no credit, and in truth she deserves little. All that she has to do could be got through with regularity and ease, if she only would do things at the right time ; but she is always a little behind-hand, and, consequently, always in a bustle and confusion. She now lays down the baby, and is preparing to light the fire, when the old woman comes straggling in with the other child, which has fallen and cut its knees, and is crying loudly. The child's knees would have taken no harm if its mother had completed what she was about before looking at them. But always acting from impulse, and never from any settled plan, she leaves the fire half lighted, and it goes out again. The knees are washed, and discovered to be very little damaged. The child is quieted. They all have some dinner, and sit over it much longer than they need. Suddenly she begins bustling about, and lights the fire with wonderful difficulty. At last it burns up, and she sets on the kettle, and sits down to wait till it boils. She ought to have spent this time in getting out her washing-tub, and her soap, and sorting the things to be washed, but she does not begin to do that till the water boils ; then she hurries to the tub, finds she has no soap in the house, and at the same time the baby begins to cry. She must attend to it ; and as it continues to cry, the grandmother advises some of that pernicious drug, ' Godfrey's cordial,' to be given to it, and talks at some length of her experiences regarding children. Now the baby cried because a pin was running into it, and even Godfrey's Cordial is no cure for that painful complaint. A string came off one of the poor baby's little garments, and the mother being, as usual, in too great a hurry to sew it on again, at once stuck in a pin, which did no harm while the child's clothes were straight, but getting turned round, the point ran into the poor little creature, whose screams were by no means stopped by its dose of Godfrey's Cordial. Some lucky movement changes the

pin's position, however, and quiet is again restored. The mother rushes out to buy soap, and in rushing back again throws over the elder child, which is not hurt, but frightened out of its little senses. The judicious grandmother takes it up and informs it that if it does not stop crying that moment, the black man will come and carry it up the chimney. And now the father of the family comes home tired after a long day's hard work. Must it not be refreshing and comfortable to spend the evening with these crying children, with his wife at the washing-tub, and his grumbling mother ? The man is a good, patient sort of man enough ; he thinks that they are all so uncomfortable because they have only got fourteen shillings a week. But that is not the ease ; they would be just as uncomfortable if they had twenty-four shillings a week, along with the same bad management and want of ' economy of time.' ”¹

¹ Abridged from *School Series*, edited by Rev. G. R. Gleig, M.A., Inspector-General of Military Schools, page 14.

CHAPTER IX.

WHAT SHALL WE DO IN THE SICK-ROOM ?

ONE evening, Mahomet the false prophet was encamped in the desert, after a long and weary journey. He overheard one of his followers (most of whom were fatalists) say to his companion, "I will loose my camel and commit it to God." On which Mahomet answered, "Friend, *tie* thy camel and commit it to God." This contains a useful lesson. When we have done all in our power for ourselves and our families, then health and sickness, recovery and death may well be committed to the will and wisdom of Him in whose hand is the disposal of all things. What we are to do when others are ill, must therefore come within the range of our present subject, and will form a suitable sequel to the chapter which taught how we were to keep them and ourselves from being ill.

There is perhaps less room for instruction in the duties of nursing the sick than would appear at first sight. It seems an intuitive gift with many women, I had almost said with most women, especially those who know what it is to have been ill themselves. It is found among the highest, the lowest, the richest, the poorest, the oldest, the youngest. When the Dauphin of France was attacked by small-pox in 1752, his wife nursed him night and day. A stranger physician was called in, who thought she was a hired attendant. "Behold," said he, "the best nurse I ever saw. What is your name, *ma bonne*?"¹ Many a cottage child will be found to be as skilful a nurse as the stately French Dauphiness. Love and compassion, those two feminine qualities, will be found to be the best prompters, and therefore the best teachers. There are, on the other hand, a minority of essentially bad nurses—

¹ The familiar French appellation for a nurse.

women who rasp the feelings of their unfortunate sick relatives, and who are the horror of surgeons and physicians,—looks, tones, movements, are all incongruous with the quiet sanctity of the sick-room. I doubt whether much can be done by tuition in such cases. Still there may be a few hints given, which, if any such are willing to learn, may be useful, while even those who possess the valuable gift, may not be the worse of hearing them.

1. *Be composed.*—It is almost better for a sick person to be without a nurse at all, than to have a fussy fidgety one in the room, who gives the poor invalid the feeling of living in the midst of a small whirlwind. That it proceeds from the nervousness and anxiety of affection is no comfort, and indeed is often only an aggravation, for the fresh worry that the poor nurse is sure to throw herself into, is a check upon the expression of uncasiness or additional illness, which is often a relief. Real affection, united with common sense, will produce the steady, calm demeanour which is such a rest and comfort to those who have to struggle with the nervousness and irritability incidental to severe illness. Want of presence of mind in a sick-room is productive of worse evils than mere distress to the invalid. The fussy, easily agitated nurse will be quite overwhelmed by the sight of a fainting fit, or the bursting afresh of a vein after bleeding ; she will forget the simplest remedies, or be too nervous and faint to apply them properly ; she is always in danger of mistaking medicines, and sometimes gives a lotion internally, and carefully rubs on a tonic or a soothing draught. It is no exaggeration to say that far more suffering, and even loss of life, has been caused by want of composure and presence of mind in a sick-room, than by negligence, whether wilful or undesigned.

2. *Be quiet.*—To speak and to move gently almost everybody knows are requisites, but people are apt to forget that slight noises scarcely heard by those in health, are most irritating and annoying to the sick. The rustle of the leaves of a book, or the scraping of a pen, or the rustling of a silk dress, or shoes that have the least possible suspicion of a *creak*, or poking and mending the fire, or the unnecessary rattle of the lock in opening and shutting the door, often cause an amount of nervous suffering which excites the pulse and other bad symptoms, though the expression of it may be smothered from the patient's dislike to appear captious or troublesome. Nurses ought to think of these things, and avoid them

without being told to do so. Be very careful, however, never to *whisper* in a sick-room, or to allow of any conversation near enough to be only partially heard. A loud voice is less injurious than striving to catch the meaning of words and sentences.

It is very common to allow many persons free entrance into the sick-room, and no error in nursing do we find more frequently in cottage homes. Out of mistaken kindness the neighbours flock in to discuss the symptoms, and to tell dismal stories of precisely similar cases, which invariably end fatally. It is a good rule to allow only one person to go in at a time, and as seldom varied as possible, for a new face is often a positive shock to an invalid. When the patient wishes to sleep, or to lie quiet, a signal ought to be agreed upon—a towel hung across the handle of the door outside, or a long piece of paper put through the key-hole. Few people seem to understand that silence and darkness are the two great soothers and restoratives in a sick-room ;—of course, the degree of light to be admitted must entirely depend on the feelings of the patient, but a gentle twilight is often preferable to total darkness.

3. *Be orderly.*—No one who has not felt it would believe how annoying it is to a sick person to see any want of order in the room or about the bed—it is sufficient of itself to keep awake and to irritate, and thus to retard recovery. A nurse's constant duty ought to be to arrange all the little things in the room, if she can do it noiselessly and unobtrusively,—to put the bed-clothes straight,—the medicine bottles on a tray covered with a clean white cloth, instead of being scattered here and there,—the books, watch, and handkerchief, at hand,—empty cups and plates carefully banished,—and glasses and spoons, as well as everything else connected with the sick-room, kept scrupulously clean. Great order should be observed with regard to medicine bottles ; those required at night must be kept separate from those in use during the day, while those used only occasionally ought to be put away in a cupboard, high out of the reach of young children. Labels with directions should be kept upon all the bottles : *POISON*, in large letters, written upon those containing laudanum or poisonous liniments ; and nothing should be trusted to memory. Before giving a dose, even from a bottle with the appearance of which the nurse thinks herself perfectly familiar, she ought to read the label again. For fear of mistaking the orders of the doctor, it is an

excellent plan to write them down each morning on a card placed in some conspicuous spot where all can refer to it ; the medicines, the number of times they are to be given, the quantity and nature of the nourishment, and so on. Often when patients are very fidgety about the good order of their rooms and nurses, they are from weakness very unwilling to maintain it in their own persons. Unless forbidden by the medical man, a nurse ought to encourage as frequent a change of linen as possible ; to have the hair taken down and gently combed and brushed at least once a day ; to continue washing with lukewarm water, first part of the body at a time, then that covered up, and another part sponged. Gently rubbing the limbs is pleasant and beneficial when a person has been long confined to bed, a little flour, being first sprinkled upon the hands to prevent them from chafing the skin. I have said so much in former chapters of the necessity of ventilation in sick-rooms and elsewhere, that I need not return to the subject except to advise that frequently in the day the window should be opened for two or three minutes at a time, while the patient is well covered if it be cold ; the air in the room will thus be changed, and much refreshment produced.

4. *Be kind.*—Listen patiently to the sick person's little fancies and depressions ; don't contradict them unnecessarily, and never laugh at them ; it may quicken the pulse but cannot do any good. Without meaning to be unkind, a nurse often is essentially so. When an invalid is feeling particularly ill and uncomfortable, it is excessively teasing to be told " how well you are looking to-day : " perhaps the cheek is flushed, and the eye brightened with feverishness, and it is provoking to have it insinuated, as the patient in her irritability thinks is meant, that she is not so ill as she says, or that she is " making a fuss." Want of tact will give rise to the other extreme of saying, when the sick person is really better, and anxious to be thought so, " How shocking you do look to-day ! " Never tease the sufferer to appear better than she really can be ; all efforts ought to come from her own will. When she has her bed made, don't set her up on hard chairs by way of strengthening her ; but if there is no sofa or easy chair, lay her down on the floor wrapped in a blanket. On the other hand, don't go into the other extreme of over-sympathy and lugubrious looks. A cheerful expression, and even occasionally a quietly playful manner, will do much to remove any temporary unreasonableness, for sick persons are often

very like children. Kindness during recovery is especially necessary ; then, at least, the invalid feels more dependent upon it. Those accustomed to severe illness know that convalescence is the most trying time of all. Everybody is full of congratulation—interest and sympathy slacken—the doctor's visits get fewer—the nurse begins to feel how tired she is—the patient is full of self-reproaches that she cannot feel better and happier—the excitement is over—aches and pains start into existence that she had no time to think of before—languor and depression now take the place of feverishness, and positive crossness is often added to the humiliation of weakness. Then is the time for a nurse to show that her heart is in her work ; the soothing manner, the kindly words of counsel, the tender touch and tone will sink much more deeply into the heart than during the time of active suffering, when the mind was fully occupied.

5. *Take great care of yourselves.*—As I am not speaking just now to hired nurses, you will not wonder when I say that to neglect our own health and strength when engaged in the sick-room is the most selfish thing we can do. To undergo greater fatigue than is necessary may be very zealous, but it is very foolish ; it gives additional distress to the invalid ; it will in reality diminish your value as a nurse, by rendering you more liable to discomposure and nervousness ; and though it may not appear to be injurious at the time, will produce that common result—the healthy laid up when the sick are cured. Rest whenever you can ; be in the fresh air a short time every day ; if possible, take your meals in another room ; take light but nourishing and sufficient food ; it will only do harm to the sick person if you show your affection by being unable to eat.

Besides the duties of sick-nursing, it is of importance to know some of the common remedies for cases of sudden emergency. Many a woman loses her common sense if any one cuts himself, and faints or thinks she is going to faint at the sight of blood ; even when she does not do so, she is often ignorant of the best mode of proceeding during the interval that often elapses before the doctor arrives.¹

Persons in a fainting fit are often treated injudiciously. I was once propped up on a hard chair close to a blazing fire and kept

¹ For directions how to treat bleeding from wounds, burns, chilblains, &c., see Appendix B.

there till, no thanks to my nurses, I came to myself feeling half-roasted. If the face of the fainting person be pale, lay her flat on the sofa or floor ; cold water must be dashed or sprinkled on the face and hands and behind the ears ; plenty of fresh air, along with the usual remedies of smelling salts or burnt feathers applied to the nostrils will soon revive animation ; sometimes a short sudden tap on the palms of the hands is of use ; afterwards a little sal-volatile in water may be given. If the face be flushed, the head ought to be raised, hot bottles put to the feet, and ice or cold water applied to the head ; in both cases, all fastenings ought to be unloosed.

Many persons lose their lives by want of presence of mind when a small portion of their clothes catch fire ; and many lives are lost by others in the room also losing their presence of mind. The first impulse of fear is to ring the bell, rush madly about the room, or into passages full of draughts, so that the fire is fanned, and in a few minutes the unfortunate sufferer is hopelessly burned. The first thing to be done is to snatch up a hearth-rug or table-cloth, or any thick woollen thing that may be nearest ; it should be rolled tightly round the person, which will exclude the air, and extinguish the flame ; if water is within reach, it should be sluiced over the burning parts, but do not go in search of it—a moment's delay is fatal. If a person is alone in a room, and there is nothing better to be had, the best plan is to roll over and over on the carpet till the fire is extinguished.

There is a very simple process by which muslins, used for ladies' and children's dresses, can be prevented from going on fire. Dissolve a small piece of alum in the water in which muslins are rinsed. When dry, if a light be put to them, they will smoulder slowly away, but not break out into a blaze. And this, so far from being injurious to muslin, improves its appearance greatly.

In a former chapter, I have spoken of various kinds of vegetable poisons. There is no antidote to them, and therefore when taken into the system, there is no remedy but their instant removal by the stomach-pump, if such can be obtained ; and if not, by emetics. A large dessert-spoonful of flour of mustard in water is a simple and safe emetic, also a large table-spoonful of common salt, both to be repeated if not effectual when first taken.

There are mineral poisons, however, which can be rendered harmless by other substances, hence called antidotes. If a poison is known to be an acid by the name on the bottle, or by dis-

coloured spots on the dress, or having a sour taste when the tongue is applied, alkalis will be the proper antidote ; such as chalk, magnesia, soda, whiting mixed with milk, or plaster torn from the wall if nothing better is at hand. If, on the contrary, poisoning has occurred by an alkaline substance, such as pearl-ash, vinegar would arrest its progress. The antidote for corrosive sublimate, is eggs ; and for sugar-of-lead, epsom salts. Arsenic is often used for destroying rats, and also by farmers for steeping seed-wheat to prevent the attacks of insects ; it is therefore often in the way of children and others, frequently causing fatal accidents. There is an antidote to this awful and rapid poison called the hydrate sesqui-oxide of iron,¹ which combines with it and renders it harmless ; but as this is not likely to be procured in time, milk, sugar, or eggs may be given along with an emetic as quickly as possible. When mercurial poisons or verdigris have been taken, the whites of fourteen or fifteen eggs ought to be mixed with a quart of water, and a wine-glassful given at intervals of a few minutes.

It will be as well to mention that, in cases of infectious diseases, you should use the following easy method of disinfecting and fumigating :—"Get from any druggist two ounces (price one penny or so) of the chloride of lime ; sprinkle it dry upon the floor, or better still, mix it in a small basin of water ; and having dipped one or more towels in this solution, hang them up on chair-backs in various parts. One pennyworth of peat charcoal, spread on trays, will render the air equally sweet. Should the patient die, a more powerful means of destroying infection (called fumigation) must be used. Place in various parts of the room three or four large tea-cups or soup plates, previously warmed a little by holding them to the fire ; put into each a table-spoonful either of *ground nitre* or *common salt*, and then add to each a little *oil of vitriol*. Strong suffocating fumes will at once arise and pervade all parts of the chamber. While this is going on, let doors and windows be shut for half an hour or more, and then opened to disperse the fumes."² Coffee is a good disinfectant also ; the raw bean being pounded and then roasted.

It would be strange if, in a chapter intended for that solemn place, the sick-room, I were not to say one word of the higher needs of the patient, or the higher duties of the nurse, but the field

¹ See Youman's *Handbook of Household Science*.

² Mr. Pairman

is so wide that I cannot enter upon it. Suffice it to say that it is only that faith in Jesus Christ which has supported us in health, prompted the performance of all household and family duty, increased every joy, and softened every sorrow, that will be our best friend in the chamber of sickness, or on the bed of death. Sad it is when religion has to be sought for in the place where it ought to be an old and cherished inmate, and where there is no time to make the new and strange acquaintance. Still it is sometimes the case that those who knew not the salvation of the Cross before they entered the four gloomy and tedious walls of the sick-room, find it out there to be all that their soul can desire. Let the earnest hope of furthering this blessed result be ever the principal thought of those who tend the sick, and who know, therefore, that they may soon stand beside the dying, or mourn over the dead.

CHAPTER X.

CONCLUSION.

I WISH to conclude this little volume as I began it, with a few miscellaneous remarks to teachers.

I. The teaching of common things by books is a move in the right direction, and is infinitely better than the silence and ignorance which formerly prevailed ; but months of theoretical teaching will be found of less avail than a few simple practical lessons. Hercin lies the difficulty. Except on a small scale, and in rare instances, the establishment of schools for the practice of "Common Things" is yet a thing hoped for—not accomplished. Still, there is progression, and the attention of the country is much more drawn to the subject than it has ever been before, greatly owing to Miss Burdett Coutts' admirable scheme of prizes, and her useful publication of the results. There seems every reason to hope that soon the cooking-school and the washing-school will be as familiar words as the "sewing-school."

After the mental labours and physical fatigues of a long day's teaching, schoolmistresses cannot be expected to superintend the hard work of practical classes ; but they may throw themselves into the scheme with interest, they may do much by representations of its urgent importance, and they may give encouragement to some such admirable scheme as the following, communicated by Mrs. Heaton, of the Queen's School, Windsor,—

"What is the state of things now ? A pupil-teacher is chosen at the age of, say, fourteen ; she is, probably, from the poorer classes. It is a great thing for her ; her parents are pleased, and are desirous to help her in every way. She rises in the morning, and at once goes to school. She remains there all day, unless,

perhaps, she returns for a short time to dinner. In the evening she has lessons from the mistress, or prepares lessons for her own class of scholars ; and this she continues to do for five years. As her stipend improves, she perhaps lays by a little, but far likelier she is smarter in her dress, and shows more that she 'feels' her position as she gets nearer the end of her apprenticeship. Being aware, however, that a certain amount of knowledge in domestic economy will be expected, to qualify her to gain a Queen's scholarship, she crams with receipts, etc., which are sufficient, she knows, to get her through, and she feels that she has done what she could.

" But how different would be the condition of these young persons, if some such plan as the following were adopted from the very date of their apprenticeship. We will suppose a school of eighty girls, a mistress's residence near, two pupil-teachers. The pupil-teachers to be at the school each morning at eight ; the school to open at nine for actual business. Let the two pupil-teachers and the mistress dine together every day ; let them join in the expense ; from eight to nine let the dinner be prepared as far as it can be ; they will all thus learn. Let two girls, ordinary pupils, attend at the same hour, not the same each day, but two of the eldest, and let all above eleven be considered old enough. They will do all the rough work, and will greatly assist the preparations for dinner, make the beds, etc. Then when the school lessons begin, if one half of the school be employed in needlework, the mistress may easily arrange her time-table, so that for one hour from eleven to twelve, she can spare the two girls who assisted in the morning, and the pupil-teachers alternately, to cook the dinner, which has been partly prepared ; and a warm dinner, good for both teacher and pupil-teachers, the remains of which would most likely feed at least one other girl, would be every day enjoyed. This may seem a very paltry scheme, but I am fully persuaded that if properly acted upon, much real practical information, much experimental knowledge, of the greatest use in after-life, would be gained by the pupil-teachers, and no parent would object, if it was understood that it was impossible to pass the examinations without exhibiting practical knowledge on these subjects ; and in every school some lady could be found who could testify to the fact of what the pupil-teachers could do. I know that many of the

clergy find it a difficult thing to procure funds to carry on a school, and therefore shrink from attempting industrial training because of the expense it must entail ; but by this means no assistance, or very little, would be required. Every school-house has a kitchen, every schoolmistress must dine. Three or four dine for less than one, proportionably, and with greater comfort. The pupil-teachers could afford to pay their share. It would be a far better plan than forcing them to live altogether with the mistress. That arrangement brings much heavy responsibility, without effecting a commensurate amount of good ; and is a positive evil when the pupil-teachers are compelled to it, or when the mistress is obliged to receive them.

“But it may be urged, that this plan, or a modification of it, would take an undue amount of time. I differ from those who say so. The change of employment will be beneficial to health, and there will be more vigour, physical and moral, in consequence of the actual bodily exertion. This I can assert from my own experience.”

Schoolmistresses might use much of their influence over pupil-teachers to encourage them to take up these plans with energy and cheerfulness, not because they are obliged to do it, but because they feel that they are thus qualifying themselves for their future arduous tasks. If their hearts were in it they might practise at home the lessons which they share with the ordinary pupils, who, with the wonderfully circling power of influence, would thus be invited to perfect themselves also in household work and knowledge. There is one district in England where the food for many sick poor was cooked by the pupil-teachers.

II. There is a temptation which teachers find is very hard to resist,—the forcing on the mental powers of those who have the capacity to become “show pupils,”—generally the very children who ought to be restrained instead of urged. It is true that their clever intelligent answers, and great delight in study, will bring you and your school much credit ; but you may be sure that the brain, that delicate and important organ, will be overtasked, and the victims of your vanity, and perhaps their own, will pay the penalty in long years of bad health and irritable nerves. It is, besides, an established fact, that youthful prodigies seldom fulfil their early

promise, and often become duller than the duller of their former school-fellows. The study of "Common Things," both theoretically and practically, will be found most useful in such cases by creating a variety, and therefore a rest in ordinary school labour. The material work will also be found almost as good as an active game, or calisthenic exercises, for stretching the limbs and expanding the chest after many hours of stooping and constrained attitudes.¹

III. In your teaching both of "Common Things" and other branches of education, remember that the use of few words and clear words is a great object. To make your pupils understand you, you must first thoroughly understand the subject yourself; when you do so, you will then be able to reduce what you have to say into small compass. Lengthy sentences only encumber the sense. To do this, however, requires both time and trouble. The Irishman was not guilty of a "bull" when he said that he had not time to write a short letter, as any one will acknowledge who has attempted the difficult task of condensation. If you are not willing to *take* time, or not able to *make* time to be concise, you will never become good teachers.

Seek to know and to teach the meaning of the words you use, or meet with in the reading lessons, especially those connected with common things: you will find that an additional interest will thus be created for your pupils,—eyes will widen, heads will be raised, and general attention fixed. It will be almost as good as a story. For instance, they will henceforth have two ideas instead of one, if you tell them that the pretty little pink and silvery star shining out amidst the grass which they know so well, was originally named *day's-eye*; that the goldfinch is so called because of the patch of gold upon its wing; the chaffinch because it feeds upon chaff; the woodpecker because of its custom of pecking or tapping upon the trunks of trees; the kingfisher because of the royal or kingly splendour of its plumage; the hawk because of the "havoc" it makes among the small birds which are its prey. It would interest them to know that the common word *field*—spelt by old English writers "feld"—signifies a place where all the

¹ It would be a good thing if the use of stools and forms without backs were abolished in schools. The spine is thereby much fatigued, and long stooping injures the chest, and hinders the free play of the breathing organs.

trees have been "*felled*" or cut down, and was so called from the time that England was covered with forests, and the "*felds*" were few and far between : or that a "*quick-set*" hedge, one made of living plants instead of a fence of dead wood, comes from the same word they repeat in their creed—the "*quick* and the dead"—the living or that which hath the power of animated movement or growth : that the word *library* recalls the time when books were written upon the bark (*liber*) of trees ; while paper was so called from the papyrus or Egyptian reed mentioned in Scripture, as "*the paper reed by the brook,*" the broad leaves of which, for a long time, were used for writing upon : or that the common words *husband* and *wife* had characteristic meanings, the one literally signifying the *house-band*, keeping it all bound and knit together, as it is said in an old rhyme,—

" The name of the *husband* what is it to say ?
Of wife and of house-hold the *band* and the stay ; "

while the word *wife* comes from the same derivation as the words *weave*, *woof*, *web*, and was given to her who was engaged in the diligent pursuit of household industry, the web and the woof being then the most ordinary type of such occupations. It would add point to a common English geographical lesson to be taught that the Angles and Saxons of ancient days have left traces of their existence in the common name of England or Angle-land, and in the names of Essex, Sussex, and Middlesex, once the portions of land belonging to the East Saxons, the South Saxons, and the Middle Saxons ; while Norfolk and Suffolk were the divisions belonging to the Northern and Southern "*folk*" of the East Anglian kingdom. In a Bible lesson, it will give a more intelligent appreciation of the blessed word *atonement*, to know that it literally means at-one-ment,—two reconciled and united who were formerly at enmity ; and that to *redeem* means to buy back *with a price* : while the word *tribulation*, so often used in the Bible, and so extensively known among all its followers, that the poet has declared that—

" The path of sorrow, and that path alone,
Leads to the land where sorrow is unknown,"

has the following beautiful signification : It comes from the Latin *tribulum*, a threshing-instrument, used by the Roman husband-

men for separating the corn from the husk ; so that sorrows and trials come to be called tribulations, because thus—

. . . . "The bruising flail of God's corrections
Have threshed out of us our vain affections."¹

IV. In all your fault-findings and rebukes about little things and common things, use consideration for your pupil's feelings. When there are little personal faults of uncleanness, untidiness, want of respectful manners, selfishness, or greediness, do not notice them publicly ; shame is a weapon which ought to be used sparingly, and never with regard to venial errors. The child thus irritated and mortified may amend the fault in order to escape a second admonition, but it will not be done heartily. You have taken away higher motives, and destroyed the pleasure which amendment would have given. You have made her almost ashamed to amend, feeling as if every eye was watching her improved condition. Had you whispered the fault kindly and gently with an evident desire for her good and comfort, it would have been the joy of her heart to have pleased you by the clean hands, tidy hair, mended garment, and respectful courtesy. Nothing will teach this consideration for the young but love alone. Woe be to the schoolmistress, the school, and the scholars, where love is not the leading principle ! A proverb beautifully says — "Love rules his kingdom without a sword." Were every school-room swayed by this powerful and holy sceptre, there would be no frightened looks before the teacher's face, and rude jests behind her back ; there would be fewer punishments, fewer falsehoods, fewer truants in heart, more good learned and therefore less evil incurred, than is often the case in schools. When knowledge and religion are made disagreeable—when dislike, instead of love, is felt for those who teach those blessed things—far worse results take place in heart and mind than if they were left altogether untaught. It is told of a religious Spanish lady, who lived centuries ago, that when asked her opinion of the torments of the lost, she thought it sufficient to say, "They do not love !"

V. Along with much in your lot of very peculiar interest and encouragement, it cannot be denied that, like every other, it has

¹ See Trench's charming book upon *Words*, from which the preceding is taken abridged.

some painful and depressing elements. The constant routine of mental and physical labour—the many years of sowing seed, with small appearance of the harvest—the want of companionship suited to your years and habits of mind,—and the frequent failure of human appreciation and sympathy, are no small trials ; but there are blessings and encouragements which God alone can bestow, and which He gives liberally to those labouring in such an important portion of His vineyard. “ ’Tis not a man’s blessing me that makes me blessed ; he only declares me to be so ; and if I do well, I shall be blessed whether any bless me or not.” ¹

¹ Selden’s *Table-Talk*.

APPENDIX A.

SINCE I wrote the preceding pages, a friend put into my hands an account (extracted from the *Book and its Missions*) of what has been called "The Saucepan Reformation!" "Marian," a female agent of the London Home Missionary Society, had a strong conviction of the barriers presented to civilisation and religion by the want of all means of household economy and comfort among the wretched inhabitants of St. Giles'—a miserable district in London—the men being thus almost necessarily driven into evil habits and evil company. She purchased a number of strong serviceable iron saucepans, and lent them out to the women. They have gradually come into general favour and requisition. There is a greater aspect of comfort already visible, and about dinner-time the noses of the passers-by are saluted by the odours of soups and stews, more grateful than those which had long reigned undisturbed in St. Giles'." The recollection of those saucepans has been vivid and pleasant in my mind during what would otherwise have been the somewhat tedious task of collecting and copying the following receipts. I trust that each teacher will study them practically, and try to improve and add to them, with an earnest wish to follow the example of "Marian" in practical wisdom and consideration for the real needs of the poor. One saucepan might be of more service than many words, but it would be indeed unlike "Marian" if any of my readers allow their good deeds to stop at saucepans! They are only as stepping-stones set in marshy places, which lead to firm ground and safe pathways.

Turnip Soup.

Slice three onions, put them into a stew-pan with a quarter of a pound of dripping, and dredge a little flour on it; let it stew without water (the cover of the vessel being taken off), turning it now and then till it is a good brown. Add three quarts of boiling water, four or five sliced turnips, and two or three carrots, boil until the vegetables are all in a pulp, break them fine with a spoon, add pepper and salt to taste, boil half an hour longer till it is quite smooth, then add two spoonfuls of flour and milk. It may be thickened with a little boiled rice.

Jelly Soup.

Sixpence-worth of fresh tripe boiled in a gallon of water, with two or three onions, will serve a large family for several days with most nutritious food. The tripe is taken out of the jelly next day, and kept for use by itself, either fried or stewed, with a little milk, pepper, and salt, while the jelly makes excellent broth or soup, with rice, sage, barley, or vegetables.

Potato Soup.

Save all the cold potatoes of several days' dinners, cut them down, and put them into a pan with one onion sliced, a quart of water, and one of sweet milk. You may add a small bit of butter and a spoonful of flour; let this boil slowly for two hours; add a little pepper and chopped parsley.

Cheap Soup.

Take one pound of bacon, cut into small pices, one quart of split-peas, a quarter of a peck of potatoes, pared; one turnip cut down, several onions, a little salt and pepper; add three gallons of water, and stew the whole over a gentle fire for five hours, taking care to keep the vessel covered.

Pea-Soup.

Take four table-spoonfuls of pease-meal; mix it with four quarts of water; after boiling, add a spoonful of dripping, and salt, pepper, and a little sago, and boil again for ten minutes.

Cabbage Soup.

Boil a large cabbage till tender, beat it well; and boil again in the same water; strain it through a colander, add a spoonful of dripping; boil all together with salt and pepper. This soup resembles potato soup.

Cheap Cottage Soup.

Clean a sheep's pluck thoroughly, parboil it, cut it into small pieces, returning the meat to the stock it has been boiled in; add two onions, one carrot, and one turnip cut small; season with pepper and salt; three or four potatoes improve it; boil the whole for two or three hours, covered close.

Rice Soup.

Take an ox-heel, or a small quantity of tripe, lean beef, or sheep's liver; put it on with four or five quarts of water; and stew it gently for five hours; let it stand till cold, take off the fat, and in this fat fry two or three onions, put these to the stock made by the cow-heel, add two pounds of rice, and boil for an hour and a half slowly, then add pepper and salt to taste, one quart of skim milk, and two spoonfuls of flour; stir it with the soup by degrees, keep stirring for a few minutes, and then serve.

Vegetable Soup (French).

Take two cabbages or lettuces, a handful of spinach, and a little parsley, all well washed; chop them very small; take six carrots, as many turnips, three or four onions, also cut small; stir them in a quarter of a pound of butter or dripping; add two quarts of boiling water, then stew them for two hours; put in a little pepper and salt, a pint of young peas in summer, or grey peas in winter, but the latter must have been previously soaked and boiled; let all stew another hour.

Pea-Soup without Meat.

Take a pint of whole peas, let them soak all night; next day put them into three quarts of boiling water, let them boil till tender, then mash them together, so as to form a paste; put them back into the water, along with a quantity of turnips and carrots, all cut into slices, with some sliced onions; let the soup simmer gently for two hours, then thicken with oatmeal, and season with pepper and salt.

Vegetable Soup.

Boil a quart of overgrown green peas (or, if in winter, grey ones) in two quarts of water, with a bunch of mint, till they will pulp through the sieve. Fry in some dripping, or a small piece of butter, a large onion cut in rings, some crusts of bread, and the thick part of a lettuce cut small, add this to the liquid the peas have been boiled in, and the pulped peas; savour with pepper and salt; boil all together; add a little thickening made of flour and water, or potato-starch and water.

Sheep's-Head and Barley Broth.

Take a sheep's head, wash it well, cut out the tongue; take the brains and put them in salt and water for an hour; put the head and tongue in a pan with five quarts of water; add half a pound of Scotch barley well washed, three carrots, three turnips, three onions, all cut in small pieces, and a bunch of sweet herbs; let it boil two hours; half an hour before the time is expired, add a good spoonful of oatmeal, mixed with a pint of water to thicken it. There ought to be a gallon of good broth. Boil and chop the brains, add to them a little of the broth, dried sago, pepper and salt, which with the tongue will be an addition to the head, and dine four persons.

Cottage Soup.

Take two pounds of lean beef, cut into small pieces, with one-fourth of a pound of bacon, two pounds of mealy potatoes, three ounces of rice, carrots, turnips, and onions sliced, a leek and cabbage. Fry the meat, cabbage, and onions in butter or dripping, the latter being the most savoury; and put them into a gallon of water, to stew gently over a slow fire for three hours,

putting in the carrots at the same time, but the turnips and rice only time enough to allow of their being well done; and washing the potatoes, which should then be passed through a colander; season only with pepper and salt; keep the vessel closely covered. (American.)

To make four gallons of Soup to cost 1s. 9d.

Take a cow's head (cut the lean meat from the cheeks and neck, and put it aside), wash the head well, and put it in a pan with four gallons of water and a handful of salt; let it boil till the meat leaves the bones, which take out; cut the meat in pieces, and pour the liquid into a vessel till next day. In the meantime, take a quart of split-peas, steeped in water all night previous; put them in a stew-pot, cover them well with water, and let them soak it all up in the oven, or near the fire. Take twelve potatoes, six carrots, six turnips, a bunch of sweet herbs and onions; cut the roots in pieces, and tie up the herbs in a bunch; put the liquid into a pan with the soaked peas, roots, and herbs; let it boil till the peas are dissolved; add a little pepper and salt, and the cut meat. If it do not measure four gallons, add water before it is quite finished. It will keep several days if the fat on the top be unbroken, and longer if warmed up in the pan.

	s.	d.
Proportion of cow's head, ...	1	0
Peas, ...	0	6
Potatoes, carrots, turnips, &c., ...	0	3
	1	9

To use the meat cut off the Head, 4½ lbs. cost 1s. 6d.

Take two pounds of the meat, cut it into large pieces, sprinkle with pepper and salt, and put it in a deep dish with a pint of water; take four pounds of potatoes, pare them, slice a few, that they may be close to the meat; sprinkle with pepper and salt, and shred an onion; add the rest of the potatoes, and bake two hours in a moderate oven.

Meat, ...	8d.
Potatoes, ...	1½d.
Onions, ...	0½d.

A FEW HINTS UPON COOKERY WHERE THERE IS NOT MUCH MONEY TO SPEND UPON MEAT.

GENERAL RULES FOR MAKING SOUPS.

"They must be made with cold water, suffered to boil only a few minutes, and then kept simmering for many hours.

"It is the reverse for meat when boiled as a *dish of itself*, as that should be put into *boiling* water at once, and then kept under the boiling point till it is done. To continue it at a boil hardens and spoils it.

“ Bullock’s-liver, ox-cheek, which is about 2d. or 3d. a pound, bacon, dried beef, red-herring, suet-dumplings, and fish of all kinds, make good soup, with the addition of *rice*, *barley*, oatmeal, peas, and hard crusts toasted *very* brown; also, *all kinds* of vegetables and herbs, such as nettle-tops, turnip-tops, water-cresses, dandelion bleached, &c.

“ Vegetable soup, with bread fried in fat, is the best article of food after solid meat soup, and you can thus make a dish nourishing and savoury from materials you could not otherwise eat; in short, make soup of *every* kind of *meat*, bones, farina, fish, vegetables, herbs, stale bread, &c.

“ *Observe*, when fish is used, the bones should be taken out before it is cooked, and, with the *jins*, heads, &c., must be stewed a long time by themselves, with salt, &c., and then added to the rest. No dish must be made of fish with the bones in, except when it is dressed by itself, as it would be dangerous to everybody, particularly to children.

“ Finely-chopped meat, put into cold water, and gradually heated, then strained and pressed, makes the best soup for invalids.

“ Fish may be used in various ways besides soup. When plain boiled, if it be cut, it must be put into boiling water, to set the gluten. If the fish be whole, and the skin uncut, it must be put into cold water, and always with a little salt. Fish baked with savoury herbs and dripping is very good. Fish with rice; fish stewed with potatoes and herbs, &c.; fish made into a pie, with potatoes, herbs, &c., are all excellent dishes for a family.

“ Always make stews of all kinds slowly. They do well in a slow oven in a *covered* dish or pan, always commencing with the water *cold*. If you have not a covered dish, tie some thick paper over the top, and that will answer the same purpose.

“ In families, as soon as one day’s dinner of soup or stew is ended, the pan or saucepan might be wiped out clean, and the next day’s meat or stew set to simmer on the hob or in the oven. A small fire is best for this sort of cooking.

“ The frying-pan has many advantages in cooking, as it is a very quick mode of warming up all kinds of bits and odds and ends of meat, vegetables, &c., making them very relishing and palatable; but it is not a good method of dressing solid pieces of meat.

To prepare Dripping for keeping.

“ If it be taken hot from the dripping-pan, pour it immediately into boiling water; when all the cinders, or any other particles which may have fallen in, will sink to the bottom. When quite cold, take off the cake of fat which will remain at the top, and put all the cakes of fat obtained in this way into a jar, with a little salt; place it in a saucepan of boiling water, let it remain till it is all entirely settled, put it in a cool place, and, when cold, it will become quite solid.

“ Should there be a collection of cold dripping taken from the pan, the process is the same, only it should be melted twice in boiling water before

putting into the jar for keeping, as it will have retained more flavour of the meat, which is not so good for making pies and puddings.

"Cold dripping, as it comes fresh from the pan, without melting, is very good to put in, and give relish to potato-pie, to eat with bread, vegetables, &c., as it contains more flavour of the meat. Beef-dripping is the best; but all is useful. Different dripping should not be melted together."—Quoted from Miss Burdett Coutts' *Prizes for Common Things*.

Fish Pudding.

Take any cold fish that may be left, and clean it from all the bones, lay it in a dish with a little pepper and salt and a small bit of butter. Mash three or four potatoes with a little milk, cover the dish, and bake before the fire.

Potato Pie.

Peel and slice thin as many potatoes as are required. Put them in a pie-dish. Mix sliced onions, a few slices of bacon or other meat, or, in the absence of other meat, a small piece of dripping. Season with pepper and salt, and bake.

A Potato Stew.

Peel some raw potatoes, slice them thin. Put the slices into a deep frying-pan or pot, with a little water, an onion, and a bit of pepper. Then take a bone or two of a breast of mutton, or a little strip of salt pork, and add it to the rest. Cover it down close, keep it in the steam, and let it stew for an hour.

Another Potato Dish.

Take two or three pickled herrings, put them into a stone jar, fill it up with potatoes and a little water, and let it bake in an oven till it is done.

Economical Dish.

Cut some pretty fat ham or bacon into slices and fry of a nice brown; lay them aside to keep warm; then mix equal quantities of potatoes and cabbage, bruised well together, and fry them in the fat left from the ham. Place the mixture at the bottom, and lay the slices of bacon on the top. Cauliflower or brocoli substituted for cabbage is truly delicious,—and to any one possessing a garden quite easily procured, as those nearly blown will do. The dish must be well seasoned with pepper.

A Pot Pie.

Boil three or four potatoes. Mash them, and while hot place them on a baking-board, and knead them up with flour and salt into a good dough; roll it out, then butter and flour a cloth, and place the paste upon it. Put into it half a pound of beef or mutton cut into small pieces, half an onion,

pepper, and salt. Tie it up close, and plunge into a pot of boiling water, and boil slowly for two hours. This is as good a paste for apples, only the fruit must be stewed before it is put into the paste; it requires only two spoonfuls of flour, and it costs *very* little.

Toad in the Hole.

Get about two or three pounds of meat trimmings, or serag of mutton; cut it into small pieces, and put it into a baking-dish with some pepper and salt; pour over it a batter, and put it in a slow oven for two hours. The batter must be made with a few spoonfuls of flour, a pint of skim milk, and one egg well beat into it.

Irish Stew.

Put a pint of water into a saucepan with a little salt and pepper, and some scraps of meat, fat and lean, or fat only, if no lean can be had, and boil it gently for half an hour. Then cut up about a dozen middling-sized potatoes, peel them, slice each into about half a dozen pieces; partially boil them by themselves, and then, with an onion or two, add them to the stew. When the potatoes are tender and inclined to mash, the stew is ready for the table. Should potatoes be bad, or too dear, half a pound of cheap Patna rice may be boiled in a pint of water in a separate saucepan, and when the rice has swelled and become soft it may be added to the stew.

Broiled Bones.

Take any kind of bones—those of beef, fowls, and a shoulder of mutton, are generally preferred. Divide them, rub them with mustard, pepper, and salt, and broil over a clear fire; served with fried potatoes; and a little gravy may be added.

Fresh Herrings Baked.

Wash the herrings in clear spring-water; when they are thoroughly clean drain them, and then, without wiping them, lay them in a dish or baking-pan; pepper and salt them; chop finely two or three onions, some parsley, thyme, and strew over them; cover them with equal proportions of vinegar and small beer; tie them over, and let them bake one hour in a slow oven. They should be kept in the pickle, and make a pleasant dish when cold.

Potted Herring.

Take off the heads and tails; clean the fish, and shake salt on them to draw out the blood; leave them one night, then rub them with black pepper. Pack them in a tin pan; put slices of onions between the layers, and pour on vinegar enough to cover them. Lay over them a sheet of buttered paper, or a crust of oatmeal bread; bake them till the bones are dissolved. A little mace, whole pepper, and butter improve them.

Bubble and Squeak.

Cut slices of boiled or roasted beef, salt or fresh ; let them be fried quickly until brown, and put them into a dish to be kept hot. Clean the pan from the fat ; put into it greens and carrots previously boiled and chopped small, or, instead of these, large onions sliced thin and fried, though both the latter are sometimes omitted. Add a little butter, pepper, and salt ; make them very hot, and put them round the beef with a little gravy. Cold pork boiled is thought by some to be a better material for bubble and squeak than beef, which is sometimes hard. In either case the slices should be very thin and lightly fried.

Lobscous.

Mince, not too finely, some cold roast-beef or mutton. Chop the bones, and put them in a saucepan with six potatoes peeled and sliced, one onion also sliced, some pepper and salt ; of these make a gravy. When the potatoes are completely incorporated with the gravy, take out the bones, and put in the meat ; stew the whole together for an hour before it is to be served.—*American Receipt.*

Turescus.

Mince very fine part of a cold boiled leg of mutton, and mix it with rice ; season it very high with black pepper, add salt, and make it into balls. Tie each ball separately in a cabbage leaf ; boil it about half an hour, and serve immediately, very hot.—*American Receipt.*

To cure Bacon—(Cobbett's Receipt.)

The two sides that remain, and which are called flitches, are to be cured for bacon. They are first rubbed with salt on their insides, or flesh sides, then placed one on the other, the flesh sides uppermost, in a salting-trough which has a gutter round its edges to drain away the brine. For to have sweet and fine bacon, the flitch must not be sopping in brine, which gives it the sort of taste that barrel pork and sea pork have, and than which nothing is more villanous ; every one knows how different is the taste of fresh dry salt from that of salt in a dissolved state, therefore *change the salt often*, once in four or five days ; let it melt and sink in, but let it not lie too long ; change the flitches, put that at bottom which was first on the top, do this a couple of times ; this mode will cost you a great deal more in salt than the *sopping mode*, but without it your bacon will not be so sweet and fine, nor keep so well. As for the time required in making your flitches sufficiently salt, it depends on circumstances, the thickness of the flitch, the state of the weather, the place wherein the salting is going on ; it takes a longer time for a thick than a thin flitch ; it takes longer in dry than in damp weather ; it takes longer in a dry than in a damp place ; but for the flitches of a hog of five

score, in weather not very dry or damp, about six weeks may do; and as yours is to be *fat*, which receives little injury from over salting, give time enough, for you are to have bacon until Christmas comes again. The place for salting should, like a dairy, always be cool, but always admit of a free circulation of air; confined air, though cool, will taint meat sooner than the mid-day sun accompanied by a breeze. With regard to smoking the bacon, two precautions are necessary; first, to hang the flitches where no rain comes down upon them, and next, that the smoke must proceed from wood, not peat, turf, or coal. As to the time it requires to smoke a flitch, it must depend a good deal upon whether there be a constant fire beneath, and whether the fire be large or small; a month will do if the fire be pretty constant; but over-smoking, or rather too long hanging in the air, makes the bacon *rust*; great attention should therefore be paid to this matter. The flitch ought not to be dried up to the hardness of a board, and yet it ought to be perfectly dry, before you hang it up lay it on the floor, scatter the flesh side pretty thickly over with bran, or with some fine saw-dust, not of *deal* or *fir*; rub it on the flesh, or put it well down upon it; this keeps the smoke from getting into the little openings, and makes a sort of crust to be dried on. To keep the bacon sweet and good, and free from *hoppers*, sift fine some clean and dry *wood ashes*. Put some at the bottom of a box or chest, long enough to hold a flitch of bacon. Lay in one flitch, and then put in more ashes, then another flitch, and cover this with six or eight inches of the ashes. The place where the box or chest is kept ought to be *dry*, and should the ashes become damp, they should be put in the fireplace to dry, and when cold put back again. With these precautions, the bacon will be as good at the end of the year as on the first day. It may be as well to observe, in reference to the above receipt given by William Cobbett in his *Cottage Economy*, that most counties in England have their peculiar method of curing hams and bacon, each varying in some slight degree from the other, and, of course, each is considered orthodox. But for simple general rules, the above may be safely taken as a guide; and those who implicitly follow the directions given, will have, at the expiration of from six weeks to two months, well-flavoured and well-cured bacon.

Sweet Pudding.

One pound of flour, one-fourth pound of minced suet, a little salt, a quarter of a pound of treacle, one egg, and milk; to mix it into a light dough, pour into a basin, and boil two hours. If any of this is left it fries nicely the next day.

Economical Family Pudding.

Bruise with a wooden spoon through a colander, six large or twelve middle-sized boiled potatoes; beat four eggs, mix with a pint of good milk, stir in the potatoes; sugar and seasoning to taste; butter a dish, bake half an hour. This receipt is simple and economical, as it is made of what is wasted in

most families, viz., cold potatoes, which may be kept for two or three days till there is a sufficient quantity.

Rice Pudding without Milk or Eggs.

Put six quarts of water in a saucepan, and when it boils, add to it one pound of rice, a quarter of a pound of brown sugar, a tablespoonful of salt, and the rind of a lemon. Boil gently for half an hour, after which, strain off the water, leaving the rice rather dry; then add three ounces of sugar, four tablespoonfuls of flour, and half a teaspoonful of pounded cinnamon. Stir all of it on the fire for a few minutes, and then put it into a tin or pie-dish to bake. The water which has been poured from the rice with a little of the juice of the lemon forms a pleasant drink.

French Roll.

Make a light paste, roll it out, sprinkle over it some bread crumbs, grate over this the rind of one lemon, and squeeze over it the juice; then spread over the whole golden syrup, and roll it up as a jam-dumpling; tie it in a cloth and boil it.

Cheap Rice Pudding.

Wash one quarter pound East India rice, and put it in a deep dish; pour over it one quart of skimmed milk; add a spoonful of brown sugar or treacle, and half an ounce of shred suet or dripping. Bake one hour and a half. Cost, one penny three farthings.

Barley Pudding.

Wash one quarter pound of Scotch barley, put it into a pan with a pint of water; let it boil till the barley is soft and the water soaked up. Put it in a dish with a pint of skimmed milk, a tablespoonful of sugar, and the same of chopped suet or dripping. Let it boil an hour and a half. Cost, one half-penny.

Family Rice Pudding.

Wash half a pound of Patna rice; put it into a very deep dish, with from one to two ounces of butter in an equal quantity of suet, a quarter of a pound of soft sugar, a little allspice pounded, and two quarts of milk. It should be baked in a slow oven for three quarters of an hour. A few raisins or currants, apples, preserves, or any kind of fruit may be added to this pudding. Millet, sago, or tapioca puddings, may be made in much the same manner.

Hasty Pudding.

Set some milk on the fire, and when it boils, put in a little salt; stir in by degrees as much flour as will make it of a proper thickness; let it boil quickly a few minutes, beating it constantly while on the fire; pour it into a dish, and eat it with cold butter and sugar. Some persons add eggs to this.

Oatmeal Pudding.

Take a pint of the best fine oatmeal, pour a quart of boiling milk over it, and let it soak all night; the next day, put it in a basin just large enough to hold it, add two eggs, beaten, and a little salt, cover it tight with a floured cloth, and boil it an hour and a half. It may be eaten hot, with cold butter and salt; or cold, sliced and toasted.

A good Breakfast for Children.

Break sea-biscuits into a basin, pour on boiling water, and cover it for ten minutes, then turn it out, and add a little milk and treacle.

Sweet Bannocks.

Take half a pound of treacle, and half a pound of meal, with a piece of butter the size of a walnut melted in the treacle; mix, roll, cut out, and bake in the oven. This forms a very wholesome, sweet cake.

Brewis.

This is very good food for children. It is nothing more than a thick top crust of bread put into the pot where salt beef is boiling, and is nearly done; it draws the fat, becomes relishing with the flavour of meat and salt, and is nourishing to the stomach.

Porridge of Green Peas, Onions, or Leeks.

If you have the liquid in which meat of any kind has been boiled, use it; if not, water will do; in two quarts boil a pint or a pint and a half, when shelled, of green peas, or twelve good-sized onion or leeks; when they are quite tender, have ready four spoonfuls of oatmeal or flour, gradually melted with milk till it has taken up a quart; stir it in with the peas, and keep stirring till it boils up and thickens; season with pepper and salt, and a little bit of butter, lard, or dripping.

Baked Apple Pudding.

Rub the bottom and sides of the pie-dish with suet or butter, put a layer of bread crumbs, and upon these a layer of apples cut into quarters, then another layer of bread, and another of apples, continuing until the dish is filled, leaving the top layer one of bread; sprinkle the surface with brown sugar, melt some butter or lard in a little water or milk, and pour it over. Bake for an hour in a slow oven.

A spoonful of fresh yeast in puddings answers the purpose of two or three eggs.

For preventing the Taste of Turnips in Butter.

Put one tablespoonful of pounded saltpetre into a quart bottle; fill it with hot water and let it dissolve. Before milking, put a tablespoonful of the liquid into each pail.

JAMS AND JELLIES.

Raspberry, Currant, and Gooseberry Jam.

To every pound of fruit add three-quarters of a pound of sugar ; put fruit and sugar on the fire in a brass pan ; simmer slowly for half an hour *after* it comes to the boiling point.

Raspberry, Currant, and Gooseberry Jelly.

Put the fruit in a jar into a pot of boiling water, and simmer for half an hour ; then pour it into a cloth, and let it drip ; and then to every English pint or *nutchkin* of juice, add one pound of sugar. Put into a brass pan, and boil twenty minutes after it comes to the boil.

All jams should be made of fruit *not* fully ripe, as they require less sugar, and are less apt to ferment. All jams and jellies must be kept in a cool, dry place, otherwise they spoil, and are wasted. The least damp makes them useless.

One brass pan ought to serve a whole village !

COOKERY FOR THE SICK.

Calf's Foot.

Get from the butcher a calf's foot well cleaned, lay it in a pie-dish, and cover it with sweetened milk and a little lemon-peel ; bake it till the meat is quite tender, which you can try with a fork. If for a young child, the milk only must be given, and the meat will serve for any other member of the family.

Meat Jelly.

Take half a pound of mutton, half a pound of beef, and half a pound of veal or pork, with a small piece or bone of bacon ; put water enough only to prevent it burning, and cover it close ; let it simmer for three or four hours till the juice of the meat is entirely out, then strain it off, and let it stand till cold. If there is any fat, it can then be removed.

A person recovering from an illness must not be left all night without food. Some of this jelly placed beside them, where they can reach it easily, is a very excellent thing.

Barley-Water.

Get some pearl-barley, wash it in four waters—that is, water poured on it four times and thrown away, so that it may be clean ; rub two or three pieces of sugar *on* a lemon cut open, and put them in a jug with the washed barley and a few slices of lemon-peel ; then pour boiling water on the whole, and cover it over until it is cold.

Gruel.

Take one tablespoonful of fine oatmeal, and two tablespoonfuls of water ; pour on this a pint of boiling water, and put it all into the saucepan ; boil for half an hour, stirring and skimming it well ; then tie a small bit of thin

muslin over a clean jug, and pour the gruel through. It may be flavoured with salt, sugar, lemon-peel, red currant jelly, or a little sherry, according to taste.

Toast and Water.

Toast about three inches of the *crust* of bread till it is of a light brown on both sides; then plunge it into cold water, and let it stand for half an hour in a covered vessel. When the crumb is used it soon sours in a warm room, and when made with boiling water it is insipid and unrefreshing.

Preparation of Oatmeal found useful in the commencement of Dysentery.

Put a quarter pound of oatmeal, an ounce and a half of sugar, half a tea-spoonful of salt, and three pints of water; boil slowly twenty minutes, stirring continually. Before serving, add one pint boiled milk, one ounce butter, and a little pounded spice.

Beverage of Figs and Apples.

Have two quarts of water boiling; split six dried figs, and cut two apples into six or eight slices each; boil the whole together for twenty minutes; pour the liquid into a basin to cool, and pass through a sieve when it is ready for use. The figs and apples may be drained for eating with a little boiled rice.

Mutton Broth.

Take one pound of scrap of mutton, put it into a saucepan with two pints of water and a little salt; let it simmer gently for two hours; strain it through a sieve, and when cold carefully remove every particle of fat. It may be thickened with a little arrow-root or ground rice, as required.

Liebig's Beef Tea.

Chop a pound of lean beef as fine as for sausage-meat; mix with a pint of cold water; put it over a slow fire; when it has boiled five minutes, strain through a coarse cloth; salt to taste.

Apple Water.

Slice two large apples, put them into a jar, and pour over them one pint of boiling water. Cover close for an hour; pour off the fluid, and sweeten if necessary.

Apple Tea.

Roast eight fine apples in the oven, or before the fire; put them in a jug with two spoonfuls of sugar, and pour over them a quart of boiling water. Let it stand one hour near the fire.

Bran Tea.

Invaluable for softening the throat, and most nourishing for the sick and aged. Take two or three tablespoonfuls of middle-sized bran (not too coarse, as that is greasy); put it into a jug, and pour on it a quart of boiling water; let it stand for about a quarter of an hour, and then pour off the water from the bran. The tea may be sweetened with white sugar or

fine honey. When wine is good for the patient it may be added, or a little lemon juice. It is, however, not unpleasant without either of these additions. A wine-glassful of this tea may be taken many times in the day. Several persons in France have been kept alive with no other nourishment for weeks.

Lemonade.

Cut into slices a moderately-sized lemon ; put them into a jug with a little of the peel and some sugar ; then pour over them one pint of boiling water ; let it stand for two hours covered close ; strain, and it will then be fit for use.

To make Arrow-root.

Put one teaspoonful of arrow-root into a basin ; rub it very smooth with two spoonfuls of cold water ; pour over this half a pint of boiling water or milk in such proportion as may be allowed, stirring well the whole time. It is generally better to boil it for two or three minutes. Sweeten to taste.

A simple Custard Pudding.

Take half a pint of milk, one egg well beaten ; mix them together, and sweeten to taste. Bake in a small basin for twenty minutes.

Currant Drink.

To a pint of fresh-gathered currants (stripped) put a pint of water ; let them boil together ten minutes or a quarter of an hour, then strain, and sweeten to taste ; a few raspberries added give a pleasant flavour. The same may be produced in winter, by simmering two tablespoonfuls of currant jelly in half a pint of water.

Mucilage of Gum-Arabic.

One ounce of gum-arabic in powder ; mix well with two tablespoonfuls of honey ; shave a little rind of lemon ; clean off the white pith, and cut the lemon in slices into a jug ; then stir on it, by degrees, a pint and a half of boiling water. This is particularly good in any complaint that affects the chest, as cough, consumption, measles, &c.

To make Jelly for a sick person in consumption, on recovery from inflammation or fever, but improper for a sick stomach.

Take a quart of stock that a cow's heel has been boiled in for six hours, remove the fat, a quart of home-made wine, or porter, or beer ; the juice and rind of two lemons, one quarter pound brown sugar, and the whites of six eggs, beaten to a froth ; put all into a pan, and let it boil five minutes ; if not sweet enough, add a little more sugar ; make a coarse cloth into a pointed bag, by running it up from the corner ; pin it to the backs of two chairs, pour the jelly through, and put it back again into the bag once or twice till it runs clear ; then throw a large sheet or cloth over the whole to keep it warm, that it may run through before it grows cold and forms a jelly. If it does so, it must be warmed to boiling heat again in the pan. Stock from cow's heel costs 1s. 6½d. ; wine, 10d. ; lemon, 3d. ; sugar, 2½d. ; eggs, 3d. ; the yolks may be mixed with three half-pints of milk, and made into a custard, either by baking, or in a pan over the fire.

Ground Rice Milk.

Boil together two tablespoonfuls of ground rice with a pint of milk. Sweeten it according to your taste, adding the juice of half a lemon. Let the whole boil half an hour over a moderate fire. Eat it warm.

Iceland Moss Jelly.

Wash and bruise Iceland or Irish moss, and soak it all night; dry and boil it, putting an ounce to a quart, till reduced to one-half the quantity of water; strain it through a sieve. Take it with milk or wine, or flavoured to taste. It may be boiled in milk, and turned into a shape when cold.

Port Wine Jelly.

Melt in a little warm water an ounce of isinglass; stir it into a pint of port wine, adding two ounces of sugar-candy, an ounce of gum-arabic, and a nutmeg grated. Mix it all well, and boil it ten minutes; or till everything is thoroughly dissolved. Then strain it through muslin, and set it away to get cold.

Apple Tapioca—(A new Receipt for Invalids.)

Pare, core, and quarter eight apples; take half a spoonful of tapioca; put it to soak and swell all night in the water; put in half a tea-cupful of white sugar and a little lemon-peel; put this into a stew-pan and let the tapioca simmer ten minutes, then put in the apples and stew ten minutes more. When the tapioca is clear, it will form a jelly around the apples.

Tapioca Jelly.

Take four tablespoonfuls of tapioca; rinse it thoroughly, then soak it five hours in cold water, enough to cover it. Set a pint of cold water on the fire; when it boils, mash and stir up the tapioca that is in water, and mix it with the boiling water. Let the whole simmer gently, with a stick of cinnamon or mace. When thick and clear, mix a couple of tablespoonfuls of white sugar with half a tablespoonful of lemon-juice, and half a glass of white wine; stir it into the jelly; if not sweet enough, add more sugar, and turn the jelly into cups.

APPENDIX B.

ON THE MORE SIMPLE DISORDERS AND INJURIES TO WHICH CHILDREN ARE LIABLE.¹

THE object of the following observations is merely to afford some guidance in the treatment more immediately required in several of the commoner complaints to which children are liable. Any attempt at describing individually the different diseases incident to childhood would here be out of place; all that is necessary being such an amount of information as may enable the

¹ As competent medical sanction is quite indispensable on a subject of this nature, it may be proper to state here, that Dr. John Smith, Lecturer in the Medical School, Edinburgh, has kindly written Appendix B.

teacher, or others in charge, to afford remedial assistance in those cases which are either of so simple a nature as not to demand the attendance of a medical man, or which occur where the services of one cannot be easily or directly procured.

In order to be ready for emergencies, some knowledge of the *weights and measures* used in medicine is advantageous; and a few of the more useful *remedies*, &c., being kept at hand—especially where no druggists are to be found within a convenient distance—will be of service. These remedies may consist of castor-oil, syrup of senna, magnesia, grey powder (mercury and chalk), Dover's powder, antimonial wine, ipecacuanha wine, and ipecacuanha in powder; chalk mixture, lime-water, creosote, some pieces of lint and of oil-skin, or gutta pereha skin, one or two bandages, &c.

The *signs of illness*, which ought to attract our attention in children, are shivering, loss of appetite, unaccountable thirst, unnatural flushing of the face, listlessness, inclination to sleep or lie down, depression of spirits, unusual heat of skin, cough or sneezing, watery eyes, general pains in the body or limbs, eruptions on the skin, vomiting or purging, tumidity of the belly, emaciation, &c. Most of these symptoms may occur in a transitory and unimportant manner, but, at the same time, they comprehend those ushering in the most serious maladies, and on that account should always be attended to from their first appearance, and watched, lest they become gradually more severe.

It is scarcely necessary here to mention those *diseases* to which children are especially liable, as they are everywhere pretty generally known. Croup, hooping-cough, measles, scarlet fever, small-pox in unvaccinated children, some inflammations of the eyes, and several eruptions or diseases of the skin, are among those which we may always expect to be occurring.

Most of these are *contagious or infectious* diseases:—that is, they are capable of being communicated from the sick to the healthy, and of spreading in this way. Cleanliness and ventilation are here of primary importance in preventing the accumulation of contagious emanations from the bodies of the diseased; while proper attention to diet, to maintaining the proper temperature of the body, and avoiding all causes which weaken or exhaust, are the most effectual methods of enabling the healthy to resist such contagious emanations, when unavoidably exposed to them. In diseases of the eyes and of the skin, towels, sponges, &c., ought never to be indiscriminately used; but those of the patient should be kept rigorously apart from all others, as contagion in these cases is very apt to be thus communicated. Indeed, in many skin diseases, such as itch, several forms of what is called ringworm, and some other diseases of the scalp, contagion is so liable to occur, that it is best to separate the patient entirely from the healthy children. With reference also to the eruptive fevers, &c., common to early life, such as measles, small-pox, scarlet fever, &c., even after the disease is *cured*, in the ordinary acceptance of the phrase, the patient ought not to be allowed to

return to school, or mix with the other scholars in any way, until recovery is so far advanced that the skin shall have been completely restored to its healthy condition, so that its surface shall not be scaling off, nor affected with any scabs, pustules, nor anything of the kind. The mere red marks remaining after small-pox are of course to be excepted, as these continue long after a perfect cure has been established, and when no danger of contagion any longer exists.

Whenever any severe or unusual symptoms of illness arise, time should not be wasted in attempts at guessing at the disease, or conjecturing what should be done, and endeavouring to treat it without the assistance of a medical man; in all such cases a physician ought at once to be sent for. Even in those cases where disorders apparently of a very trivial nature do not obviously *improve* under simple treatment, it is better not to persevere too long without proper medical attendance.

But although these, and the so-called 'specific' diseases, of which some have been already mentioned, are generally of too serious a nature to be treated by non-professional persons, yet many simpler disorders of the stomach and bowels, of the chest, such as common colds, &c., and many slighter forms of injury to which children are subject, may, with a little attention, be easily and effectually treated in this way; and with that view the following directions are subjoined.

DISEASES, INJURIES, ACCIDENTS, ETC., AND THEIR TREATMENT.

Looseness or Purging.—If the motions are frequent, scanty, and attended with much pain or straining, from one to three teaspoonfuls of castor-oil, with one, two, or three drops of laudanum in it, may be given. If the motions are abundant, a teaspoonful of chalk mixture may be administered three or four times a day; and should the disease continue for some days, one grain of Dover's powder, and one of the grey powder of mercury and chalk, should be taken three times a day. The diet should be restricted to rice, arrow-root, and such substances; and the drink should consist of small quantities of milk and lime-water in equal proportions, thin arrow-root, &c.

Constipation.—When the bowels are not regularly opened every day, the use of brown bread, oatmeal, &c., is sometimes all that is required. In more obstinate cases, however, aperient medicines may be necessary; but unless we *wish* to induce purging, there is no necessity for administering powerful doses for this affection. Castor-oil, in the dose of one to four teaspoonfuls; or syrup of senna, in a dose of one or two teaspoonfuls; or magnesia, in a dose of ten or fifteen or twenty grains, will be found to answer in most instances. Salts and other drastic purgatives are generally productive of bad effects in simple constipation.

Colds and Coughs.—A simple cold, if treated at its commencement, by keeping the patient somewhat warmer than usual, and bathing the feet and legs in warm water at night, and taking some warm drink—such as thin gruel upon going to bed—may generally be cut short. If not, however, then all we can do is to guard against exposure during its progress, and to treat the various symptoms of it, such as cough, &c., as they occur.

A cough is either what is termed dry, that is, without expectoration—or loose, that is, with the flow of mucus in the lung much increased. In a dry cough, from eight to ten drops of ipecacuanha wine may be given in a little sugar and water every four hours; and if much heat of skin, or pain in the chest, is present, half a teaspoonful of antimonial wine may be combined with this dose. In a loose cough, if severe, half a teaspoonful of the syrup of squills, in two teaspoonfuls of camphor mixture, may be substituted for the other remedies; and where a considerable quantity of mucus seems to be lodging in the air-passages, an emetic of twenty grains of ipecacuanha in powder, may be given in a cupful of warm water.

Ear-ache.—Poultices, and warm fomentations to the ear, with the use of brisk purgatives, and the restriction of the diet, are the general measures to be adopted in the treatment of this affection.

Inflammation of the Eyes.—What is commonly known by this name comprehends a number of diseases of far too serious a nature to be treated without the attendance of a medical man. In simple cases, the eyes may be bathed with a tepid solution of two or three grains of sulphate of zinc in a wine-glassful of water. And where the eyelids are inclined to adhere together, a little hog's-lard may be smeared over their edges at night. The bowels ought to be kept gently open during this disease, but purging is unnecessary. This affection in children is very apt to be communicated by contagion, and great caution is therefore necessary to prevent any matter formed from reaching the eyes of other persons.

Blows or Bruises.—In these cases there is generally observed some degree of swelling and redness at the seat of the injury; the red colour soon gives place to a violet or livid hue, and that again in course of cure to green and yellow tints, the original colour of the skin being next restored. From the time of receiving the injury until the disappearance of discolouration is generally from ten to fourteen days. In slight bruises, bathe the part, if no abrasions are present, with vinegar and water. Never apply leeches, unless great inflammation and swelling are present; but in all cases where the injury is so severe as to require such treatment, it ought to be submitted to a medical man. A coagulum formed of alum and the white of an egg, is said to hasten the removal of discolouration in the skin.

Abrasions of the Skin.—All extraneous matter, such as sand or gravel, sticking about a part from which the skin has been abraded, ought to be removed by bathing it with warm water. A piece of lint or rag soaked in tepid water is then to be laid over the injured surface, and over this again a piece of oil-silk or thin gutta-percha, so as to prevent the rag or lint becoming dry by evaporation. A light bandage, merely sufficient to retain these appliances in position, is all else that is required; ointments, plasters, &c., only tending to irritate and inflame the injured surface, unless specially called for.

Burns and Scalds.—Injuries by heat may be divided into two kinds, viz., those where the skin remains whole, although perhaps blistered, and those again where the skin is destroyed. Burns or scalds on the body or head are much more dangerous than those on the limbs; and during childhood their effects are more serious than in after-life. The principal danger to be apprehended is that of the patient sinking from the shock or severe effects of the injury; and burns which produce this effect, although generally extensive, are sometimes not so painful as less formidable cases. In removing the clothes from a scalded part, care must be taken not to injure or break the skin. Where the skin is not destroyed or broken, but only reddened, or blistered, cold applications are to be employed. If however the injury is over a large space, these must be used cautiously, as then they are apt to increase the danger of sinking already alluded to. Cold water, spirits and water, vinegar and water, or cold poultices—all frequently renewed—are the most ready methods of treatment in this way. Blisters ought not to be pricked or cut in any way, as they serve to protect the raw surface underneath, until healing commences there.

When the skin has been destroyed, the burn becomes more of the nature of a wound, and requires treatment not very different from a severe abrasion. Soft cotton-wool may be laid upon the part, or a piece of lint dipped in equal parts of lime-water and olive oil, or lime-water and milk, may be applied. But as the sores left in these cases are generally difficult to heal, a medical man ought to see the patient as soon as possible.

Sprains.—All injuries or affections of the joints in children should be particularly attended to. Any unaccountable swelling about a joint, although unattended with pain, a halt or lameness in walking, and pain or uneasiness in any of the limbs, ought to excite suspicion of serious disease, and be immediately investigated. The most important of all our remedies here is rest to the limb; and the principal danger to be averted is inflammation of the joint. If a joint has been injured, and is much swollen and painful, leeches may be applied to it in the first instance: after this the employment of fomentations and absolute rest are to be most relied upon; and upon the subsidence of the more acute symptoms, moderate exercise of the limb, frictions either

with the dry hand or some simple liniment, such as camphorated oil, and wearing a flannel bandage round the joint, are the chief measures to be adopted.

Fainting and Convulsion Fits.—These two very different affections are frequently confounded with one another, although, in general, they may be easily distinguished. In fainting, the face and lips become pale, the skin is generally covered with a clammy perspiration, and the patient falls to the ground motionless; in a few seconds recovery takes place with deep and heavy sighs, and occasionally vomiting then occurs. In convulsions, again, the attack comes on suddenly, and in most instances with a loud cry; the patient falls, and is affected with strong muscular writhings or spasms, the limbs being kept in violent motion, or firmly fixed in one position, while the face is much distorted, and froth issues from the mouth. These symptoms cease in from five to ten minutes, leaving the patient drowsy and motionless.

In both these affections the treatment must be much the same. Cold water dashed on the head and face,—the removal of all pressure on the neck,—such as neck-cloths, &c., and, in convulsions, the insertion of something between the teeth, such as the corner of a towel, folded once or twice, to prevent the biting of the lips and tongue, which is here apt to occur—constitute all that is essentially necessary to be done during the fit.

The most important treatment is that which has for its object the removal of the constitutional condition which leads to these fits, and this, of course, is not to be attempted by non-professional individuals.

Broken Bones.—The indications of a bone being fractured are alteration in the shape of the limb, unnatural mobility at some part of its length, and a grating or rubbing of the rough broken ends of the bone against each other at this part when the fractured bone is moved in certain directions.

All that is necessary to describe here, in the way of treatment, are those temporary measures to be adopted previous to the arrival of the surgeon. The limb should be placed in a position as nearly natural, and as easy for the patient, as possible, and maintained there at perfect rest by means of pillows placed alongside of it, or by pieces of thin wood or stout pasteboard being bandaged round the limb, and padded with tow or pieces of blanket or any other soft material, so as to be more comfortable. The patient ought to be moved as little as possible before being seen by a medical man; as by lifting and carrying individuals so injured, the ends of the bone may tear the flesh surrounding it, or be even driven through the skin.

Chilblains.—These are slight inflammations which occur on the toes and fingers, and sometimes the nose and ears—generally in winter, and where a part has been rapidly heated when it was very cold. They consist of red and swollen patches, sometimes accompanied with blisters, and these upon breaking, are apt to become ulcerated, and to occasion much annoyance.

In the simpler forms, some stimulating liniment, such as equal parts of spirit of wine and vinegar, spirit of camphor, or soap and opium liniment, any of these being applied cold, is generally efficacious. Care must be taken not to break the blisters should any exist: if they are broken, then the ulcers should be poulticed, and afterwards dressed with a little resin-ointment spread on lint, until they are healed.

Bleeding from Wounds, &c.—In cases of obstinate bleeding, the best thing which can be done until a surgeon is found is to apply pressure to that point from which the blood flows. This may be done either simply by the finger being firmly applied to the wound, or by a piece of lint or rag being folded up into a thick and small pad, and that placed upon the wound, and tied there by means of a flat bandage of some kind. Should the pad become saturated with blood, it may require to be renewed, as in that case it acts like a sponge, and increases instead of diminishes the bleeding.

Toothache.—This affection may be temporarily alleviated by scrupulously cleaning out the cavity of the tooth—as decay has generally hollowed it at some part—and dropping into this cavity a piece of cotton-wool soaked in creosote, or a strong solution of alum. It is useless, however, doing so, unless the decayed cavity is first well cleaned out, even although the pain should thus be temporarily increased. After using the creosote, &c., the hollow of the tooth should be filled up with a pellet of cotton-wool saturated with a solution of gum-mastic in ether, or with a piece of gutta-percha softened in boiling water. The condition of the stomach and bowels should in all cases of toothache be attended to most carefully.

Stings of Bees, Wasps, &c.—Should the sting itself be left in the wound, it ought to be removed, if possible; and the part may have applied to it vinegar, hartshorn-water, laudanum, or spirits of wine, on a piece of lint or thick cotton.

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